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ABSTRACT

This catalog describes 44 school-reform models. It was prepared for the U.S. Department of Education in direct response to the Comprehensive School Reform Demonstration program. The catalog's purpose is to aid schools, school districts, and states as they investigate external models that can be incorporated into comprehensive school-reform programs. The catalog divides these models into two categories: entire-school models, which provide schools with a framework for change covering most or all aspects of school operations, and skill- and content-based models (reading programs, mathematics programs, and so forth), which can be used as building blocks for comprehensive reform. The document contains introductory information on 26 entire-school models and 18 skill- and content-based models. Although all the models are noteworthy, and will figure in comprehensive-reform efforts, the primary criterion for including a model was its strength of impact on student learning. Descriptions of the models were then developed by drawing on books, articles, reports, material prepared by the developers, written responses to information requests, and telephone interviews. Each description lists the origin or scope of the model, a general description, results, implementation plan, costs, student populations, special considerations, selected evaluations, sample sites, contact information, and highlights. Six appendices contain 11 references, components of comprehensive school reform programs, a continuum of evidence of effectiveness, a list of regional educational laboratories, and a list of comprehensive regional assistance centers. (RJM)

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Catalog of

SCHOOL REFORM MODELS

FIRST EDITION

EA 030318

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Catalog of School Reform Models: First Edition

Prepared by the Northwest Regional Educational Laboratory with assistance from the Education Commission of the States

March 1998

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Acknowledgments

The Northwest Regional Educational Laboratory (NWREL) would like to thank the Education Commission of the States for its assistance in preparing the descriptions of reform models included in this catalog. NWREL is also grateful to the developers of the models, who graciously accommodated repeated requests for information.

Preface

The *Catalog of School Reform Models: First Edition* was developed by the Northwest Regional Educational Laboratory (NWREL) in collaboration with the Education Commission of the States (ECS) at the request of the U. S. Department of Education (ED). It is part of ED's effort to provide information to schools, school districts, states, and others as they plan and implement comprehensive school reform programs under the Obey-Porter Comprehensive School Reform Demonstration program (CSRD).

The CSRD legislation encourages schools to consider research-based, effective reform models as they develop their comprehensive school reform programs. This first edition of the catalog includes an initial listing of 44 such models in two categories: entire-school models and skill- and content-based models (reading, math, etc.). Seventeen entire-school models are named in the law (as examples only), and those 17 are described here, along with 9 additional entire-school models and 18 skill- and content-based models. **This listing is neither a set of recommended models nor a set of models approved for CSRD funding. There is no such list of "approved" models, and NWREL strongly discourages states, districts, or others from using the listing to limit the choice of research-based, effective models by schools that apply for funding under the CSRD program.**

Shortly after publication, NWREL will put the catalog on its Web site and begin adding descriptions of other highly regarded reform models. An expanded version of the catalog will be printed within a year.

In preparing the first edition, NWREL did not conduct original research on the models. Writers collected printed material on each model, interviewed developers to increase the depth and ensure the accuracy of information presented, and had each developer review the information prior to inclusion in the catalog. The catalog as a whole also was reviewed by ED, NWREL, and ECS staff with expertise in the area of comprehensive school reform.

This first edition has been prepared as thoughtfully and thoroughly as possible within the time available. We hope it will prove useful to schools as they make informed decisions and move forward with applications for funding under the CSRD program. There is a feedback form in Appendix F for you to provide NWREL your thoughts on this catalog and suggest improvements for future editions.

General Introduction

School reform remains at the center of the public agenda even after many years of discussion, legislation, and state and local action. After years of work to improve public education, student achievement is improving but still remains below acceptable levels. This is particularly true for populations who traditionally have been poorly served by our schools. For example, on the 1994 National Assessment of Educational Progress reading assessment, 29% of white fourth graders scored below the "basic" level in reading, but 69% of African American students and 64% of Hispanic students scored this poorly.

At the national and state levels, a multitude of efforts are in progress to set high standards for student learning. State policies are being set to challenge, support, and monitor schools as they work to improve learning for all students. Incentives for improvement and sanctions for continued low performance are being established. At the same time, a number of school reform models across the country are beginning to demonstrate the ability to transform entire schools into high-performing learning centers with challenging academic standards, engaged teachers, and strong parental and community support. With the state standards movement maturing and with increasing numbers of model developers showing data to support the effectiveness of their designs, the stage is set to significantly broaden the impact of comprehensive school reform.

The Comprehensive School Reform Demonstration Program

The recently enacted Comprehensive School Reform Demonstration program (CSRD) provides financial incentives for schools, particularly Title I schools, to implement comprehensive school reform programs that are based on reliable research and effective practices and that include an emphasis on basic academics and parental involvement. Schools that receive funds are expected to plan and implement programs that integrate, in a coherent fashion, the following nine components (as specified in the law):

- Effective, research-based, replicable methods and strategies
- Comprehensive design with aligned components
- Professional development
- Measurable goals and benchmarks
- Support within the school
- Parental and community involvement
- External technical support and assistance
- Evaluation strategies
- Coordination of resources. (See Appendix B for a descriptive list of components.)

Although schools themselves are responsible for developing plans that integrate these nine components, the CSRD legislation encourages them to consider adopting externally developed research-based reform models as a central part of their plan. Because external models vary widely, it is important for schools to choose one that best meets their needs and promises to be most effective in improving student achievement. Therefore, a clear understanding of what constitutes reliable evidence of effectiveness is crucial to schools that are funded under this legislation. Research-based models should be able to provide evidence along four dimensions, including (1) the theoretical or research foundation for the model,

(2) evaluation-based evidence of improvement in student achievement, (3) evidence of effective implementation, and (4) evidence of replicability. These dimensions can be defined as follows:

1. A theory explains why a comprehensive model and the practices included in the model work together to produce gains in student performance.
2. Evidence of educationally significant improvement is shown through reliable measures of student achievement in major subject areas after implementation of the model.
3. Implementation is what it takes to make the model fully operational in schools.
4. Replicability means that the model has been implemented in a number of schools.

The best evidence on a model would include information on all four dimensions obtained using professionally acceptable research and evaluation approaches. For a variety of reasons such information is not available for many educational reform models. Consensus has yet to be established on the most appropriate instruments for measuring and comparing student achievement. It is also difficult and expensive to conduct long-term, systematic research across multiple sites using rigorous experimental/control group research designs. In considering models to use as the basis for comprehensive reform programs, then, schools, districts and states need to evaluate the evidence for each dimension provided by the reform models. (The Continuum of Evidence of Effectiveness rubric included in Appendix C of this catalog is a useful tool in thinking about evidence provided by reform models.)

Making Decisions About Reform Models

Evidence of effectiveness is crucial, but it is only one of a number of factors schools should take into consideration when determining which reform model or models to incorporate into their comprehensive school reform program. To make informed decisions about models, school communities (administrators, teachers, staff, students, parents, and local community members) may need to undertake a process such as the following:

- Assess school needs for instructional improvement and school readiness for reform
- Gain initial information about a number of school reform models
- Deepen understanding of selected models that have a potential match with school reform needs
- Discuss selected models with the full school community
- Focus on a small number of models that have high potential to meet the reform needs of a school and hold in-depth discussions with the model developers to determine the extent to which the model/school match is strong and the use of the model is feasible for the school and the developer
- Hold final discussions to confirm the decision to use one or more models and gain commitment to action on the part of the full school community

This decision-making process moves districts and schools from a beginning understanding of their reform needs and a little knowledge about many reform models to a deeper understanding of their needs and a few models. Finally, a school, in collaboration with its district, makes a decision about which, if any, reform model to include in its comprehensive school reform plan. This decision-making process is a learning experience that will play out over several months.

Support for School and District Decision Making

States, regional educational laboratories, and comprehensive regional assistance centers, supported by the U.S. Department of Education, are charged with assisting schools as they develop their comprehensive school reform plans under CSRD. While approaches across the country will vary, some similar types of activities are being planned:

- The *Catalog of School Reform Models: First Edition* has been developed to provide schools, districts, and others with preliminary information about a variety of school reform models. Ultimately, this set of descriptions of school reform models will grow into an on-line compendium of resources describing an increasing number of models with increasing detail.
- Various events and activities are being organized to bring developers of reform models face to face with school and district personnel to increase knowledge about models.
- Teams of staff members from regional laboratories, comprehensive regional assistance centers, and states are forming to conduct follow-up discussions about various reform models with schools and districts where there is interest.
- Regional laboratories and comprehensive assistance centers will facilitate more long-term interactions between schools and reform model developers after initial activities and events have been conducted.
- Developers of selected models will provide direct training and technical assistance to schools choosing their models.
- Regional teams will facilitate continuing support for schools and assist schools in monitoring progress.

Support for schools and districts, then, will begin with initial printed information and continue until schools develop a fuller understanding of research-based approaches, select or develop their comprehensive plan, and achieve successful implementation. This type of support will be improved and expanded over the next three years and be available as long as there is a demand.

Catalog of School Reform Models

This catalog was developed at the request of the United States Department of Education in direct response to the Comprehensive School Reform Demonstration program. Its purpose is to help inform schools, school districts, and states as they explore external models to incorporate into their comprehensive school reform programs. The catalog provides introductory information on models for comprehensive school reform in two categories: *entire-school* models, which provide schools with a framework for change covering most or all aspects of school operations, and *skill- and content-based* models (reading programs, mathematics programs, etc.), which can be used as building blocks for comprehensive reform. Because schools funded under this law are accountable for comprehensive school reform programs, they must choose carefully. The key is to thoroughly assess local needs and develop comprehensive plans that may incorporate one or more external, research-based models that provide maximum local leverage for sustained improvement in student results.

This catalog contains introductory information on 44 models (26 entire-school models and 18 skill- and content-based models) likely to receive significant attention as schools and states move rapidly into the early stages of this long-term effort. Seventeen entire-school

models are named in the law (as examples only), and those 17 are described here. Because of tight deadlines, the other 9 entire-school models and the 18 skill- and content-based models included here were chosen in pragmatic fashion. The primary criterion for consideration was the extent to which a model had been recognized in a number of recent and/or soon-to-be-released publications describing research-based resources for comprehensive school reform. (See Appendix A for the list of references used.) Once models were selected for consideration, the primary criterion for inclusion was strength of impact on student learning. If models did not have data showing achievement gains in at least some schools, they were eliminated from consideration. (The *Results Based Practices Showcase,* published by the Kentucky Department of Education, was very helpful in this regard, particularly for skill and content models.) Other criteria based on the nine components outlined in the law, particularly replicability, comprehensiveness, and quality of professional development and technical assistance, also figured prominently in the decision on what programs to include.

Model Descriptions

Descriptions of models were developed using a variety of sources of information: published books, articles, and reports on the models; material prepared for general dissemination by the developers (model descriptions, annual reports, brochures, curriculum samples, Web sites, and the like); written responses to requests for information; and telephone interviews. Writers worked closely with developers to ensure accuracy, and developers were given an opportunity to review descriptions and suggest changes prior to publication.

Each description contains the following information:

- ***Origin/Scope:*** This section lists the model's founder, year of origin, and number of schools/states as of January 1998.
- ***General Description:*** This section summarizes the major elements of the model: its underlying philosophy, goals, and principles; the processes schools must undergo as they implement the model; the curricula, instructional practices, and assessments involved; the organizational changes schools must make; the materials used; and/or other elements that help readers understand the nature of the model.
- ***Results:*** This section presents evidence of the model's effectiveness in improving student achievement and, secondarily, in improving student performance on other variables such as attendance or behavior. *It is crucial to note that the quality of evidence varies enormously from model to model.* For guidance in evaluating evidence, see the Continuum of Evidence of Effectiveness in Appendix C.
- ***Implementation Plan:*** This section provides information on the model's strategies for assisting schools through the implementation process. Headings include project capacity, faculty buy-in, initial training, follow-up coaching, networking opportunities, and implementation review (mechanisms for formal or informal quality control).
- ***Costs:*** Costs for each model vary considerably from school to school depending on size, distance from the developer, degree of implementation, and so forth. This section offers an approximation of what implementation might cost a school, including dollar figures for fees to developers and descriptions of other expenses a school can expect to face (such as additional staff, new computer equipment, travel, and release time for teachers).

- ***Student Populations:*** *This section reports target populations, locations of existing* schools (e.g., urban, rural), and types of students served (e.g., English-language learners).
- ***Special Considerations:*** This section highlights important issues, notes key conditions for successful implementation, and alerts school personnel to potential complications.
- ***Selected Evaluations:*** This section divides model evaluations into two columns, one for evaluations conducted by the developer and one for those conducted by outside researchers. Again, readers are encouraged to examine these and other evaluations before committing to a model.
- ***Sample Sites:*** This section lists two or three schools available to be contacted by readers interested in firsthand impressions of the model.
- ***Contact Information:*** This section provides a contact person, address, phone number, fax number, e-mail address, and Web site URL (if available).
- ***Highlights:*** Accompanying each description is a table that summarizes some of each model's key components.

Final Comments

It is worth reiterating that this catalog is not a list of recommended or approved models for comprehensive school reform. A number of models not included here have research-based approaches and strong track records in helping schools improve student achievement. After the first edition of the catalog is put on-line, descriptions of other research-based models will be added to the initial list of 44. Also, a second printed version containing additional descriptions plus updated versions of original descriptions will be published this fall.

Finally, the models included in this catalog are not described in enough detail for school personnel to make fully informed decisions about their merits or their applicability to particular school conditions. Readers are encouraged to seek additional information, such as that contained in the many current and emerging resources for research-based school reform listed in Appendix A; to investigate evidence of effectiveness in more detail; to take advantage of showcase events sponsored by states and regional educational laboratories; to seek additional information directly from model developers; and to work in collaboration with their state education agency and regional service providers to identify and analyze their own needs for improvement.

Entire-School Reform Models

Introduction: Entire-School Reform Models

Entire-school models are a relatively new and potentially powerful tool for comprehensive school reform. Arising primarily in the last decade, they vary considerably in their approaches. Some provide schools with very specific curricula and instructional strategies. Others offer only general assistance in this area, instead involving school staff in creating their own approaches within a strong process that assures attention to results. All are based in research, provide schools with a common vision, and deal in some way with the critical areas of professional development, school organization, and curriculum and instruction. A particular strength they bring to comprehensive reform is the increased likelihood that all aspects of the reform process will be coordinated across the school.

This catalog provides introductory information on 26 entire-school reform models. Seventeen of these were named in the CSRD legislation as examples and were therefore included automatically. Nine additional models were selected based primarily on the degree to which they addressed the components of comprehensiveness outlined in the CSRD law. See the matrix at the end of this section for a preliminary analysis of models' strengths in these areas.

Accelerated Schools Project (K-8)

IN BRIEF Accelerated Schools	
Developer	Henry Levin, Stanford University
Year Established	1986
# Schools Served (Jan. 1998)	more than 1,000
Level	primarily K-8
Primary Goal	bring children in at-risk situations at least to grade level by the end of sixth grade
Main Features	• gifted-and-talented instruction for all students through "powerful learning" • participatory process for whole school transformation • three guiding principles (unity of purpose, empowerment plus responsibility, and building on strengths)
Results	improvements in student achievement in many accelerated schools, based on evidence drawn from small-scale evaluations and case studies (large-scale study now underway)
Impact on Instruction	adapt instructional practices usually reserved for gifted-and-talented children for all students
Impact on Organization/ Staffing	governance structure that empowers the whole school community to make key decisions based on the Inquiry Process
Impact on Schedule	depends on collective decisions of staff
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parent and community involvement is built into participatory governance structure
Technology	depends on collective decisions of staff
Materials	training materials, *Accelerated Schools Resource Guide*

Origin/Scope

The accelerated schools approach, developed by Henry Levin of Stanford University, was first implemented in 1986 in two San Francisco Bay Area elementary schools. The Accelerated Schools Project has now reached over 1,000 accelerated schools in 40 states.

General Description

Many schools serve students in at-risk situations by remediating them, which all too often involves less challenging curricula and lowered expectations. Accelerated schools take the opposite approach: they offer enriched curricula and instruction programs (the kind traditionally reserved for gifted-and-talented children) intended to help at-risk students perform at grade level by the end of sixth grade. Members of the school community work together to transform every classroom into a "powerful learning" environment, where students and teachers are encouraged to think creatively, explore their interests, and achieve at high levels.

No single feature makes a school accelerated. Rather, each school community uses the accelerated schools philosophy and process to determine its own vision and collaboratively work to achieve its goals. The philosophy is based on three democratic principles: unity of purpose, empowerment coupled with responsibility, and building on strengths.

Transformation into an accelerated school begins with the entire school community examining its present situation through a process called taking stock. The school community then forges a shared vision of what it wants the school to be. By comparing the vision to its present situation, the school community identifies priority challenge areas. Then it sets about

to address those areas, working through an accelerated schools governance structure and analyzing problems through an Inquiry Process. The Inquiry Process is a systematic method that helps school communities clearly understand problems, find and implement solutions, and assess results.

Results

To date, no large-scale, systematic evaluations that compare student achievement in accelerated schools with that in control schools have been conducted. However, the Accelerated Schools Project has contracted with the Manpower Demonstration Research Corporation to conduct a rigorous study of accelerated schools, focusing on student achievement among other variables. The study should be completed sometime in 1999. In the meantime, smaller-scale evaluations and case studies have yielded evidence of improved achievement, school climate, and parent and community involvement in numerous accelerated schools across the country. For example, an evaluation comparing an accelerated school to a control school revealed that over a two-year period, fifth grade SRA scores in reading, language arts, and mathematics at the accelerated school climbed considerably. Over the same period, the scores of a control school declined. In another accelerated school, Metropolitan Achievement Test (MAT6) grade-equivalent scores in reading improved more than scores in a control school in four of five grades, although the results for language scores were mixed. Evaluations conducted by accelerated schools satellite centers in Louisiana, Missouri, and South Carolina also provide evidence of improved student achievement and other measures at many accelerated schools.

Implementation

- ***Project Capacity:*** National Center for the Accelerated Schools Project at Stanford University; 12 satellite centers across the country based in state departments of education, universities, and school districts.
- ***Faculty Buy-In:*** 90% of the school community (all teaching and nonteaching staff plus a representative sample of other school community members including parents and district personnel) must agree to transform the school into an accelerated school. Students are also involved in age-appropriate discussions during the buy-in process.
- ***Initial Training:*** For each accelerated school, the National Center or a satellite center trains a principal, a designated coach (often from the district office), and a school staff member who will serve as an internal facilitator. Training involves an intensive five-day summer workshop, two subsequent two-day sessions on Inquiry and Powerful Learning, and ongoing mentoring by a center staff member. The coach provides two days of training for the whole school community just before the school year begins.
- ***Follow-Up Coaching:*** During the first year of implementation, the coach provides the equivalent of at least four additional days of training. Coaches also spend 25% of their time (generally at least one day per week) supporting their school. In the early stages, the coach is more of a trainer, introducing the process and guiding school community members through the first steps of implementation. In later stages, the coach helps schools evaluate how well the model is working, assists in overcoming challenges, and continually reinforces the accelerated schools philosophy to keep momentum alive.
- ***Networking:*** The National Center and satellite centers host an annual national

conference (as well as regional conferences), publish newsletters, support Web sites, and maintain a listserver connecting teachers, coaches, and centers via e-mail. Networking opportunities also enable accelerated school communities to interact with each other on a regular basis.

- ***Implementation Review:*** Continual self-evaluation is part of the process in accelerated schools. To help schools gather information, the National Center has developed an Assessment Toolkit with five "tools": (1) a school questionnaire, (2) a coach's journal, (3) a school data portfolio for organizing quantitative data, (4) guidelines for collecting school documents, and (5) benchmarks to compare each school with a "model" accelerated school.

Costs

The Accelerated Schools Project (National Center and satellite centers) charges $13,000-15,000 per year for a Basic Partnership Agreement (minimum three-year commitment) that includes, in the first year:

- training of a coach, principal, and school staff member (excluding travel expenses)
- training materials, including three copies of the *Accelerated Schools Resource Guide*
- one site visit by a project staff member
- technical assistance by phone, fax, and e-mail
- monthly networking opportunities
- a year-end retreat
- a subscription to newsletters and the project's electronic network

In addition, schools and/or districts must provide release time for the entire teaching staff for two days of initial training and the equivalent of four days of additional training during the first year. They must also schedule weekly meeting time amounting to about 36 hours per year and cover 25% of the full-time salary and benefits of the coach (estimated at $12,000-20,000 for a coach external to the school).

Over the next two years schools receive targeted professional development in key components of the model, on-going technical assistance, monthly networking opportunities, and a site visit by a project staff member. Schools may contract with a center for additional site visits and other services as needed.

Student Populations

The accelerated schools process is generally adopted by schools with high proportions of students in at-risk situations. However, there is nothing in the process itself — essentially a restructuring process based on collective decisions of the school community — that limits it to such schools.

Special Considerations

The accelerated schools process can be a challenging one. Teachers and administrators must be willing to relinquish hierarchical decision-making structures, work together, and expend considerable time and energy to transform a traditional school into an accelerated school. Founder Henry Levin estimates that this process can take three to five years. During this time, it is crucial to maintain regular meeting time and active coaching at the school site.

Selected Evaluations

Developer

Knight, S. L., & Stallings, J. A. (1995). The implementation of the accelerated school model in an urban elementary school. In R. L. Allington & S. A. Walmsley (Eds.), *No quick fix: Rethinking literacy programs in America's elementary schools* (236-251). New York: Teachers College Press.

McCarthy, J., & Still, S. (1993). Hollibrook Accelerated Elementary School. In J. Murphy & P. Hallinger (Eds.), *Restructuring schooling: Learning from ongoing efforts* (pp. 63-83). Newbury Park, CA: Corwin.

Outside Researchers

State of Louisiana Board of Elementary and Secondary Education. (1997). *Statewide exemplary program.* Baton Rouge, LA: Author.

North Carolina Partnership for Accelerated Schools. (1996). *Accelerated Schools Project 1995-96 program description.* Raleigh, NC: Author. (Evaluation conducted by independent consultant)

English, R. A. (1992). *Accelerated schools report.* Columbia: University of Missouri-Columbia.

Sample Sites

Designation of schools for visits depends on location and capacity of the schools. Contact David Rapaport at the National Center at 650-725-7191 for suggested sites.

For more information, contact:

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Web site: www-leland.stanford.edu/group/ASP

America's Choice School Design (K-12)

(Formerly the National Alliance for Restructuring Education)

IN BRIEF America's Choice School Design	
Developer	National Center on Education and the Economy
Year Established	1989
# Schools Served (Jan. 1998)	300
Level	K-12
Primary Goal	enabling all students to reach internationally benchmarked standards
Main Features	• performance standards and reference examinations • five key design tasks (standards and assessments, student learning, teacher training, community supports, and parent-public involvement)
Results	substantial gains in student achievement on local assessments and on the America's Choice Reference exam in inner-city, rural, and suburban schools
Impact on Instruction	learning is focused on getting all students to standards, varying only the time and resources needed, using prevention, early intervention, and acceleration strategies
Impact on Organization/ Staffing	schools must hire a Design Coach, among other part- or full-time staff; a "class teacher" follows a student for 3 years; elementary school teachers specialize in reading or math; high school teachers work in interdisciplinary teams
Impact on Schedule	schedule provides extra time for students not meeting standards; in K-2, a 2½ hour literacy block every day
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	one of five key design tasks
Technology	none required
Materials	provided

Origin/Scope

The America's Choice Comprehensive Design Network (begun in 1989 as the National Alliance for Restructuring Education) is a program of the National Center on Education and the Economy in Washington, D.C. There are 300 America's Choice schools in 14 states as of January 1998.

General Description

The America's Choice School Design is a comprehensive design for schools determined to get their students to high, internationally benchmarked standards in English, mathematics, and science. America's Choice was developed by the National Center on Education and the Economy (NCEE), a leading source for standards-based education in the United States. The design is built on the America's Choice Performance Standards and Assessments Program, begun in 1992 as New Standards. The America's Choice performance standards complement and extend the content standards that the states and many districts have developed.

The America's Choice School Design incorporates a standards-based curriculum focused on the basics, conceptual mastery, and applications. It includes a design for quickly identifying students who are falling behind and bringing them back to standard, as well as a planning and management system for making the most efficient use of available resources to raise student performance quickly. The design focuses in the early years on literacy in reading, writing, and mathematics and at the high school level on a demanding academic core intended to get all students ready for college.

The America's Choice Reference Examinations measure student progress toward achieving the performance standards developed by NCEE. The Planning for Results system helps school staffs quickly identify weak spots in student performance and address them. America's Choice helps schools redesign their master schedule and extend the school day and week to give students the extra time they need to get to the standards, no matter where they start.

The America's Choice Network also designs accountability systems for districts that include rewards and consequences for schools based on their performance, systems for allocating control over funds to schools, school performance monitoring and review systems, and special assistance for low performing schools.

Results

Early results in schools in Kentucky and Chicago show significant improvements in scores on standardized tests. Of the 15 original Alliance schools in Kentucky, 13 (87%) earned cash rewards in 1995, the first year of that state's incentive program, compared with 38% of schools statewide.

From 1992 to 1996, an average of 74% of Kentucky's Alliance schools met or exceeded their performance goals — some of the toughest performance goals in the country. In Louisville, Kennedy Elementary School has seen a 25% increase in recent Kentucky Instructional Results Information System (KIRIS) scores across all grades.

In Chicago, about 80% of Alliance schools showed notable increases in their scores on citywide tests. Further, in one year these schools recorded a notable increase in fourth, eighth and tenth-grade student performance on the New Standards Reference Examinations in language arts and mathematics. Additionally, 23-49% of students taking the exams moved from the lowest category (little evidence of achievement) to the second or third of a five-category scoring rubric.

Implementation

- ***Project Capacity:*** The National Center for Education and the Economy has a staff of 100. Main offices are in Washington, D.C.; Rochester, New York; Fort Worth, Texas; and Oakland, California. The Center partners regularly with the University of Pittsburgh's Learning Research and Development Center and has regional coordinators who work directly with America's Choice schools around the country.
- ***Faculty Buy-In:*** A substantial majority of the school faculty must be committed to the comprehensive America's Choice School Design.
- ***Initial Training:*** Each school designates a Design Coach, who is responsible for working with the principal and school leadership team to implement the design, and a Literacy Coordinator (for K-8 schools), who leads implementation of the literacy program. These staff members attend intensive, multiple-week training institutes to prepare for certification as leaders in America's Choice professional development programs. Certified school staff members then lead the entire faculty through a series of workshops to put the design elements in place. The workshops include (a) an introduction to performance standards, (b) a primer on the use of examinations

referenced to standards, (c) a course on matching curriculum to standards, (d) a workshop on interpreting data from new examinations, and (e) a guide to data-based planning that is referenced to standards. Additionally, each school principal participates in a special principals' network focused on school design and implementation.

- ***Follow-Up Coaching:*** The Design Coach and Literacy Coordinator provide continuing support to the school staff. Additionally, the America's Choice Design team provides up to seven days per year of on-site technical assistance.
- ***Networking:*** Annual national conference, quarterly newsletter, Web site, and a special network for principals.
- ***Implementation Review:*** Each year the school staff participates in a session focused on analyzing the results of their work and planning for the next steps in implementation. During site visits, the America's Choice staff helps the principal and leadership team monitor implementation and strengthen design elements.

Costs

For schools that adopt this design, the cost is approximately $65,000 per year (assuming about 500 students per school). Schools or districts may contract for additional services. In addition, requirements for participation include significant commitment to the design on the part of the faculty. K-8 schools must provide a full-time on-site Literacy Coordinator, along with a School Design Coach and Community Outreach Coordinator (the latter two serving between half- and full-time, depending on the size of the school). High schools provide a full-time, on-site Design Coach, as well as a half- or full-time (depending on school size) School-to-Career Coach and Community Coordinator. In addition, schools may need to provide tutoring and other specified assistance during non-school hours.

Student Populations

America's Choice has served disadvantaged and minority students, along with students learning English. The design has been implemented in Title I, rural and urban schools.

Special Considerations

None.

Selected Evaluations

Developer

Working towards excellence: Results from schools implementing New American Schools designs. (1997). Arlington, VA: New American Schools.

Outside Researchers

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase.* Santa Monica, CA: RAND.

Sample Sites

John F. Kennedy Elementary School
3800 Gibson Lane
Louisville, KY 40211
502-485-8280
Principal: Opal Dawson

Ray Kroc Middle School
5050 Conrad Avenue
San Diego, CA 92117
619-496-8150
Principal: Judith Walker

Gage Park High School
5630 South Rockwell Street
Chicago, IL 60629
773-535-9230
Principal: Audrey J. Donaldson

For more information, contact:

Pat Harvey
National Center on Education and the Economy
700 11th Street N.W., Suite 750
Washington, DC, 20001
Phone: 202-783-3668
Fax: 202-783-3672
Web site: http://www.ncee.org.

ATLAS Communities (preK-12)

IN BRIEF ATLAS Communities	
Developer	Coalition of Essential Schools, Education Development Center, Project Zero, School Development Program
Year Established	1992
# Schools Served (Jan. 1998)	57 (12 pathways)
Level	PreK-12
Primary Goal	develop preK-12 pathways organized around a common framework to improve learning outcomes for all students
Main Features	• preK-12 pathways • development of coherent K-12 educational programs for every student • authentic curriculum, instruction, and assessment • whole-faculty study groups • school/pathway planning and management teams
Results	consistent improvement on standardized tests and statewide performance assessments in pathways that have worked with ATLAS for at least three years
Impact on Instruction	teachers focus on active inquiry and are attuned to students' individual strengths and limitations
Impact on Organization/ Staffing	each preK-12 pathway has a pathway coordinator supported by the district (0.5-1.0 FTE depending on the number and size of schools in the pathway)
Impact on Schedule	within schools, teachers meet in study groups; across pathway schools, teachers need time to plan together
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	no
Parental Involvement	parent and community involvement is integral to the ATLAS approach; many schools have family centers
Technology	no special technology required
Materials	all ATLAS materials provided

Origin/Scope

ATLAS Communities was formed in 1992 as a partnership of four leading educational organizations: Education Development Center, the Coalition of Essential Schools, Project Zero, and the School Development Program. There are 57 ATLAS schools in seven states.

General Description

ATLAS Communities is a design for educational reform linking elementary, middle, and high schools as partners in creating a pathway of teaching and learning from kindergarten through grade 12. Its goal is to create a coherent educational program for each student and to help all students develop the habits of mind, heart, and work they will need as informed citizens and productive workers in the 21st century. Thus, ATLAS goes beyond basic literacies, enabling students to develop an understanding of important concepts, to reason, to solve real-world problems, and to cherish others and their environments.

ATLAS addresses dimensions of education that cut across the grade span, across the curriculum, and across the many different constituencies involved in education. In ATLAS Communities educators, students, their families, civic leaders, business people, and cultural institutions all become deeply invested in the learning process.

For the past five years, ATLAS Communities has been working with pathways of schools in districts across the country to:

- Improve learning outcomes for all students (Teaching and Learning);
- Evaluate student work through a variety of standard and innovative assessment tools (Assessment);
- Engage teachers in serious and sustained professional development (Professional Development);
- Involve families and other members of the community in the education of their children (Learning Community); and
- Reorganize the internal structures and decision-making processes within schools and districts to support all of the above (Management and Decision-Making).

These are the key elements of the ATLAS Communities framework. Instead of focusing on selected elements, ATLAS believes that all of the parts must be connected to the whole. In order for school change to be sustained, these elements must be fully integrated.

Results

Standardized test scores have increased in all pathways that have worked with the ATLAS framework for three years or more. In Prince George's County, Maryland, for example, elementary reading scores on the CTBS test rose an average of 13% in two years. In Norfolk, Virginia, there was a 15% increase on the Test of Achievement Proficiency for research, writing and science in the 11th grade.

Performance-based, statewide assessments also show strong gains. In Gorham, Maine, the fourth grade scores on the state assessment were the highest in the district's history. In Prince George's County, Maryland, there has been marked improvement in middle school math, language, science, and social studies scores on the state assessment.

Schools have also reported a decline in discipline problems and drop-out rates, while attendance and parental involvement have increased.

Implementation

- ***Project Capacity:*** In addition to its central office in Newton, Massachusetts, ATLAS places site developers on-site for each pathway. ATLAS has the capacity to add up to 15 new pathways each year.
- ***Faculty Buy-In:*** School and district staffs must support implementation of the ATLAS design, but ATLAS does not specify the process or the percentage who must approve.
- ***Initial Training:*** ATLAS holds an initial three- to five-day institute on-site for all faculty members from each school in the pathway.
- ***Follow-up Coaching:*** An ATLAS Site Developer for each pathway provides customized technical assistance, works closely with school and district staff, organizes professional development activities, brokers additional resources as needed, and ensures that the ATLAS framework is in full operation. The ATLAS Community Study Group Specialist works intensively with each pathway during the initial year to launch whole-faculty study groups in the pathway schools.

- ***Networking:*** Annual Principals' Institute, regional institutes, cross-site institutes, site visits and use of the World Wide Web for discussion and professional development.
- ***Implementation Review:*** Each year site developers work with the pathway and school leadership groups to evaluate progress against benchmarks and plan the next year's goals and activities.

Costs

The table below provides cost information for districts that will begin implementing ATLAS schools during the 1998-99 school year. ATLAS provides comparable services each year, with cost of living increases in years 2 and 3. In addition to these costs, a district also must appoint a part- or full-time coordinator (depending on the number of schools involved).

Atlas Costs			
Year	***per school (3 schools)***	***per school (5 schools)***	***per school (8+ schools)***
Year 1 (1998-99)	$50,000	$45,000	$40,000
Year 2 (1999-2000)	$51,700	$47,200	$42,000
Year 3 (2000-01)	$53,330	$49,600	$44,100

Student Populations

ATLAS Communities has served disadvantaged and minority students, along with students learning English. ATLAS has been implemented in Title I and urban schools.

Special Considerations

An ATLAS Community pathway typically consists of a minimum of three schools (one elementary school, one middle school, and one high school). ATLAS recommends that districts complete the pathway engagement process three to six months prior to the initial training institute.

Selected Evaluations

Developer

Working towards excellence: Results from schools implementing New American Schools designs. (1997). Arlington, VA: New American Schools.

Outside Researchers

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase.* Santa Monica, CA: RAND.

Rosenblum Brigham Associates. (forthcoming, 1998). *Assessing the Impact.* South Weymouth, MA: Author.

Sample Sites

Narragansett Elementary
284 Main Street
Gorham, ME 04038
207-839-5017
Contact Person: Susie Robbins

Norview High School
1070 Middleton Place
Norfolk, VA 23513
757-441-5865
Principal: Marjorie Stealey

Rhodes Middle School
29th & Clearfield Streets
Philadelphia, PA 19132
215-227-4402
Principal: Dr. Ronald Attarian

Sample Pathway

Everett Pathway (1 elementary school, 1 middle school, 1 high school, 1 alternative school)
Contact: Pat Sullivan
Assistant Principal
Everett High School
2416 Colby Avenue
Everett, WA 98201-2993
425-339-4400

For more information, contact:

Reggie Silberberg
ATLAS Communities
55 Chapel Street
Newton, MA 02158-1060
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Fax: 617-969-3440
E-mail: rsilberberg@edc.org
Web site: www.edc.org/FSC/ATLAS

Audrey Cohen College: Purpose-Centered Education® (K-12)

IN BRIEF Audrey Cohen College: Purpose-Centered Education®	
Developer	Audrey Cohen College
Year Established	invented in 1970
# Schools Served (Jan. 1998)	16
Level	K-12
Primary Goal	development of scholarship and leadership abilities using knowledge and skills to benefit students' community and larger world
Main Features	• student learning focused on complex and meaningful Purposes • students use what they learn to reach specific goals • Constructive Actions (individual or group projects that serve the community)
Results	trends in standardized test scores show an overall improvement
Impact on Instruction	classes structured around five Dimensions that incorporate core subjects
Impact on Organization/ Staffing	full-time staff resource specialist required
Impact on Schedule	scheduling can vary due to organization of classes around Dimensions and Constructive Actions
Subject-Area Programs Provided by Developer	yes (detailed guides realigning traditional core subjects to Purposes and Dimensions)
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parents become Purpose Experts, helping further student achievement in classrooms and community
Technology	none required
Materials	provided

Origin/Scope

Purpose-Centered Education was invented in 1970 for kindergarten through the bachelors and masters level by Audrey Cohen College, an accredited, private, non-profit institution of higher educators based in New York City. There are now 16 schools in six states.

General Description

Purpose-Centered Education focuses all student learning on the achievement of meaningful Purposes that contribute to the larger global society. There are 24 Purposes, generally one for each semester at each grade level. Examples include: We Work for Safety® (Grade 1), We Work for Good Health® (Grade 4), and We Use Science and Technology to Help Shape a Just and Productive Society® (Grade 10). All core subjects — including English /language arts, mathematics, science and social studies — are focused on the semester's Purpose.

The College also has identified 24 essential abilities that are needed for achieving a Purpose and that operate as the standards students are expected to reach. From kindergarten through high school, these Purpose-Achievement Standards are developed and assessed each semester. These standards are correlated by the College to fully address all the requirements of local and state mandates for high academic performance. Examples of the Standards include:

- Select a worthwhile and feasible goal for action
- Give and receive communications, using speech, reading, writing, and other modes of expression

- Select and apply mathematical skills for effective problem-solving, communication, and reasoning.

Students meet their Standards and achieve their Purpose by using their knowledge and skills to plan, carry out, and evaluate a Constructive Action® that benefits the community. At the elementary level, each class may achieve its Purpose as a group, planning and implementing a Constructive Action in the community with the guidance of a teacher. Older students, under the guidance of their teachers, plan and implement individual Constructive Actions. Through Constructive Actions, students from kindergarten through grade 12 learn how the world works and how they can make a positive contribution to the larger world.

Instead of taking classes separated by subject area, students take Dimension classes that incorporate core subjects while eliminating fragmentation. There are five Dimension® classes: Purpose, Values and Ethics, Self and Others, Systems, and Skills.

Results

Schools using Purpose-Centered Education report improvement in student achievement, along with reduced discipline incidents and increased attendance and parental involvement. Additionally, several of Audrey Cohen's newer schools have also improved their standardized test scores. From 1994-95, scores of fifth graders at Simmons Elementary School on the Iowa Test of Basic Skills (ITBS) improved 25 points in reading, 21 points in language, and 12 points in math. At Benjamin Franklin Elementary School in San Diego, students in second and third grades improved in reading and math on a state-mandated test from 1994 to 1995. At Alcott Elementary School in San Diego, Stanford Achievement Test scores rose in math, reading, and language from 1993 to 1995. And at Sabal Palm Elementary School in North Miami Beach, fourth graders surpassed district and state averages on the Florida State Writing Assessment in 1994-95.

Implementation

- ***Project Capacity:*** Headquarters for the design are at Audrey Cohen College in New York City. Audrey Cohen College assigns a liaison to every district with schools using the design. In addition, the staff provides regular on-site technical assistance.
- ***Faculty Buy-In:*** The design defers to the decision-making procedures used by the school district and individual school.
- ***Initial Training:*** An initial five-day orientation prepares teachers and administrators to use Purpose-Centered Education.
- ***Follow-Up Coaching:*** After the initial orientation, professional staff development visits are coordinated with individual schools. There are eight on-site visits the first year, six the second year, and five the third year. In subsequent years, the number of on-site staff visits are jointly determined by the College and the school. The College also assigns a district liaison to work with the principal, teachers, parents, and a staff resource specialist selected from within each school. Thus, the College provides training, guidelines, materials, prototypes, and ongoing support to help schools implement its comprehensive system of education.
- ***Networking:*** Electronic network, information resource bulletin, and Web site.
- ***Implementation Review:*** Audrey Cohen College's National Director for Quality Assurance makes regular visits to schools to ensure quality of design implementation.

There is also a yearly review process to gauge progress using Purpose Quality Indicators, benchmarks for successful implementation.

Costs

Audrey Cohen College charges a one-time licensing fee of $7,000. Other fees are detailed in the table below:

Fee	Year 1	Year 2	Year 3	Year 4
Training	$36, 685	$23,345	$22,425	$10,000
Materials	$7,878	$6,325	$4,025	Billed at prevailing rate

Internal costs to the school/district usually include the per diem rate per teacher for a five-day, on-site orientation; a full-time or equivalent staff resource specialist (usually filled by existing personnel); and Purpose Trips (four per year per student). Reduction of fees is possible for multiple schools in a district.

Student Populations

Purpose-Centered Education is in use in rural, suburban, and urban schools for students with diverse educational needs and backgrounds — from native born to immigrant, from affluent to at-risk, from gifted to special needs. Audrey Cohen College also works in multicultural and multilingual settings.

Special Considerations

Purpose-Centered Education does not require waivers on standardized tests and can be implemented with the use of existing funds.

Selected Evaluations

Developer

Working towards excellence: Results from schools implementing New American Schools designs. (1997). Arlington, VA: New American Schools.

Outside Researchers

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase.* Santa Monica, CA: RAND.

Sample Sites

Contact Audrey Cohen College for information on demonstration sites.

For More Information, contact:

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Coalition of Essential Schools
(formerly 9-12, now K-12)

IN BRIEF Coalition of Essential Schools	
Developer	Ted Sizer, Brown University
Year Established	1984
# Schools Served (Jan. 1998)	251 (with hundreds more planning to join or exploring potential membership)
Level	formerly 9-12, now K-12
Primary Goal	help create schools where students learn to use their minds well
Main Features	• set of Common Principles upon which schools base their practice • personalized learning • mastery of a few essential subjects and skills • graduation by exhibition • sense of community
Results	some extraordinary schools; little evidence of improved test scores overall
Impact on Instruction	depends on how each school interprets the Common Principles (may involve interdisciplinary instruction, authentic projects, etc.)
Impact on Organization/ Staffing	depends on how each school interprets the Common Principles (may involve new staff, lower pupil/teacher ratio, etc.)
Impact on Schedule	depends on how each school interprets the Common Principles (may involve team teaching, common planning time, block scheduling, etc.)
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	encouraged
Technology	none required
Materials	none required

Origin/Scope

The Coalition of Essential Schools was founded by Ted Sizer of Brown University in 1984. Twelve high schools in seven states joined the Coalition that year. At present, there are 251 full members, 275 planning schools, and 558 exploring schools.

General Description

The Coalition of Essential Schools is a national network of schools and centers engaged in restructuring schools to promote better student learning. The schools share a set of ideas known as the Common Principles, which guide their whole-school reform efforts.

The Coalition was founded in an attempt to address the problems of the American high school as identified in the five-year Study of High Schools (1979-84), which was chaired by Ted Sizer. Teachers, Sizer concluded, often use practices they know do not support student learning: 50-minute periods, lecture, drill. Partly as a result, students have little opportunity to think deeply about important issues or produce work that means anything to them.

In response, Sizer formulated nine Common Principles that he believed would lead to better teaching and more genuine learning in American high schools:

1. The school's focus should be to help students learn to use their minds well.
2. Less is more. Students should achieve a thorough understanding of a few essential skills and subjects rather than a casual acquaintance with many.
3. The school's goals should apply to all students.

4. Teaching and learning should be personalized to the greatest possible extent.
5. The school's governing metaphors should be student-as-worker and teacher-as-coach.
6. To graduate, students should demonstrate mastery through public exhibitions rather than credits, grades, and test scores.
7. The school's climate should be one of "unanxious expectation," trust, and decency.
8. Teachers and administrators should consider themselves generalists first and specialists second, assuming joint responsibility for all students.
9. The school should aim for the following administrative and budgetary targets: 80 students per teacher; adequate time for teachers to plan together; competitive salaries; and per pupil costs not to exceed that of traditional schools by more than 10%.

The Coalition recently added a tenth principle encouraging schools to honor diversity, challenge inequity, and model democratic practices.

These core principles are intended to serve not as a blueprint for education reform, but as a set of guidelines to help schools redesign themselves. Consequently, the Coalition imposes no specific curricular innovations or instructional techniques on member schools. Rather, it seeks out exemplars — schools that have done an especially good job of translating some or all of the principles into practice — and shares their approaches with schools.

Results

Some essential schools, such as Central Park East Secondary School in East Harlem, have become famous for inspired work with students. Over 90% of Central Park's ninth graders graduate, for example, compared with 55% citywide. Of the graduates, over 90% attend college. Evidence also suggests that two overarching approaches used by essential schools, "authentic pedagogy" and "sense of community," can lead to higher student achievement (see MacMullen, 1996). Many of the schools in these studies were not themselves essential schools, however. The *Special Strategies* study (Stringfield et al., 1997), one of the few that has examined test scores in essential schools, found little improvement on CTBS reading and math scores in four essential schools. This and other studies (see Muncey & McQuillen, 1996, for example) also have noted how difficult it can be to put essential school principles into practice in comprehensive high schools. Even where schoolwide implementation is incomplete, these studies generally note that selected teachers make profound changes in classroom practice.

Implementation

- ***Project Capacity:*** National center at Brown University; more than 20 regional centers around the country; National Re:Learning Faculty, a core of more than 150 practitioner/trainers selected from member schools
- ***Faculty Buy-In:*** A "substantial majority" of teachers must agree to apply the principles.
- ***Initial Training:*** The Coalition has offered a range of training opportunities, among them summer institutes and "Treks" — year-long school change experiences for teams of teachers. A Trek opens with a weeklong summer seminar, during which the teams are assembled into groups of three. These triads then serve as "critical friends," sustaining and critiquing each other during the change process. Over the past few

years, the Coalition has been decentralizing operations by supporting the formation of regional centers: autonomous, independently funded local organizations that assume responsibility for essential school membership and professional development activities in their areas. Professional development opportunities offered to particular schools depend on the regional center that serves them. By the year 2000, the Coalition plans to shift all professional development activity to regional centers.

- ***Follow-Up Coaching:*** As mentioned above, Treks involve collaboration and training over a period of a year or more (the Bay Area Coalition of Essential Schools, for example, offers a second Trek workshop and follow-up during a school's second year of membership). Additionally, most regional centers provide on-site coaching upon the request.
- ***Networking:*** The Coalition hosts national conferences and supports a Web site. It publishes *HORACE* (each issue exploring a single aspect of the Coalition's work), the PERFORMANCE series (which highlights schools demonstrating significant progress), and other series on exhibitions and school change. Regional centers also offer networking opportunities for member schools.
- ***Implementation Review:*** The Coalition has no standard mechanism for assessing implementation at member schools. It has studied implementation at selected schools, released publications on the results, and modified its approach accordingly. Member schools also have opportunities (such as the Trek triads) to examine their own progress.

Costs

The ninth Coalition principle suggests that expenditures in essential schools should not exceed those of traditional high schools by more than 10%. On that basis, an essential school with 500 students receiving $5,000 per student might spend as much as $250,000 per year. The vast majority of that money would not go directly to the Coalition, however, but would be used to lower the pupil/teacher ratio, provide extra planning time for teachers, etc. In most cases, however, essential schools spend far less, either because they start with a core group of teachers rather than a schoolwide implementation or they implement selected principles rather than all 10. As for direct costs, fees vary from regional center to regional center, but a full range of programs and services including regular on-site coaching, networking meetings, regional conferences, Trek summer institutes and "critical friends" school visits, workshops and seminars on curriculum/assessment/instruction, and evaluation of school progress would cost approximately $50,000 per year.

Student Populations

All types of schools have joined the Coalition, from inner city high schools serving large numbers of at-risk and minority students to high schools located in affluent suburbs.

Special Considerations

The Coalition does not offer schools a standard curriculum or process for school change. Rather, it offers principles for school reform that (a) need to be interpreted and

adapted to local conditions and (b) if fully realized, will result in significant changes in traditional practice.

Selected Evaluations

Developer

Cushman, K. (1991, September). Taking stock: How are essential schools doing? *Horace, 8*(1).

Outside Researchers

MacMullen, M. M. (1996). *Taking stock of a school reform effort: A research collection and analysis.* Providence, RI: Annenberg Institute for School Reform.

Muncey, D. E., & McQuillan, P. J. (1996). *Reform and resistance in schools and classrooms: An ethnographic view of the Coalition of Essential Schools.* New Haven: Yale University Press.

Stringfield, S., Millsap, M. A. Herman, R., Yoder, N., Brigham, N., Nesselfodt, P., Schaffer, E., Karweit, N., Levin, M., & Stevens, R. (1997). *Urban and suburban/rural special strategies for educating disadvantaged children: Final report.* Washington, DC: U.S. Department of Education.

Sample Sites

Demonstration schools may be visited in many areas of the country. Contact the national center or the nearest regional center for information. (Check the Coalition's Web site for regional center addresses and phone numbers.)

For more information, contact:

Amy Gerstein
Executive Director
Coalition of Essential Schools
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Oakland, CA 94612
Phone: 510-433-1451
Fax: 510-433-1455
E-mail: agerstein@essentialschools.org
Web site: http://www.essentialschools.org

Community for Learning (K-12)

IN BRIEF Community for Learning	
Developer	Margaret C. Wang, Temple University
Year Established	1990
# Schools Served (Jan. 1998)	53
Level	K-12
Primary Goal	to achieve social and academic success for students by linking schools with community institutions
Main Features	• collaboration with homes, libraries, museums, and other places where students can learn • coordinated health and human services delivery component • site-specific implementation design • Adaptive Learning Environments Model of instruction
Results	student achievement in program schools has improved faster than in district schools and control schools
Impact on Instruction	teams of regular teachers and specialists work together in the classroom, providing individual and small-group instruction for regular and special students; individualized learning plans for all students
Impact on Organization/ Staffing	program facilitator; teacher teams
Impact on Schedule	flexible use of time for instructional teaming and planning (block scheduling)
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parental involvement is an essential component of the design
Technology	no specially designed equipment required
Materials	no specially designed materials required

Origin/Scope

The Community for Learning program (CFL) was developed in 1990 by Margaret C. Wang, Executive Director of the Temple University Center for Research in Human Development and Education (CRHDE). It has been implemented in 53 urban and rural schools in the mid-Atlantic region and across the country. The classroom instruction component, Adaptive Learning Environments Model, was developed under the aegis of the National Follow Through Project and has been implemented in over 200 schools in 22 states.

General Description

School is not the only place where students learn. They learn in a variety of environments, including libraries, museums, workplaces, and their own homes. CFL links the school to these and other institutions, including health, social services, and law enforcement agencies. The idea is to provide a range of learning opportunities for students, coordinate service delivery across organizations, and foster a community-wide commitment to student success.

The emphasis on collaboration extends into the classroom itself, where regular teachers and specialists (such as special education teachers, Title I teachers, and school psychologists) work in teams to meet the diverse academic and social needs of all children. The instructional component of Community for Learning is called the Adaptive Learning Environments Model (ALEM), an inclusive approach to meeting the learning needs of individual students in regular classes, including students with special needs.

As the title suggests, ALEM teachers adapt instruction for each student, using a variety of instructional strategies and grouping patterns (e.g., whole class, small groups, individuals). Students are taught to take responsibility for planning and monitoring their own progress. Learning tasks are divided into small units and evaluated frequently by the teacher, who modifies learning plans and instructional strategies on an ongoing basis. Students progress at their own pace, advancing when ready and taking extra time when necessary. Individualized attention is provided for those who are not progressing well and for those who are exceptionally talented and ready for advanced lessons in given subjects.

Each CFL school has a full-time facilitator, who oversees implementation and assists with training. Districts with clusters of CFL schools generally appoint a project coordinator, who serves as the liaison between schools, the district office, and the CRHDE. The project coordinator, the facilitator, and the principal develop a site-specific plan that mobilizes the school's resources in support of classroom and community-wide implementation.

Results

Schools in some of the nation's most impoverished inner city areas have achieved positive results following CFL implementation. A study of the first year of implementation of five CFL schools in the District of Columbia (schools identified as among the lowest performing in the district) found that teachers were making significant changes in classroom practice. The study also examined changes in student reading scores on the Stanford 9 and found that (a) scores improved at all five schools; (b) program schools improved more than other elementary schools in the district; (c) the districtwide ranking of program schools climbed considerably (one school jumped from 119th to 46th, for example); and (d) schools where teachers implemented the program earlier in the year showed more improvement than schools where implementation started later.

At a middle school in inner city Philadelphia where 78% of students are Latino and 93% live below the poverty line, students have shown significantly higher academic progress than students at a control school. A follow-up study of students who had attended this middle school reported that they had a significantly lower dropout rate than their high school peers (19% vs. 60%) and that 48% of them were performing at grade level in the eleventh grade compared to 26% of their peers. A similarly situated elementary school in Houston also witnessed improvements in student achievement, along with positive changes in students' and teachers' attitudes about their school.

Implementation

- ***Project Capacity:*** Implementation is supported by a team of program implementation specialists from the CRHDE.
- ***Faculty Buy-In:*** Commitment by the consensus of a school's staff is required for whole-school implementation.
- ***Initial Training:*** An initial two-day planning meeting with facilitators and principals involves: an overview of the program design; a needs assessment process that helps identify training needs at each school; visits to established Community for Learning sites; and the development of an implementation plan for each school. Shortly after

this meeting, teachers attend a four-day workshop for training and classroom preparation.

- ***Follow-Up Coaching:*** Program implementation staff from the CRHDE provide 10-15 days of on-site professional development and technical assistance to teachers and related services staff on an as-needed basis. This assistance is custom-designed for each school based on needs identified by teachers, observations by principals, and implementation assessment data gathered by program staff. Additionally, the project coordinator and facilitators and principals from participating schools assist with professional development, and successful CFL teachers provide peer coaching and mentoring. The goal is to strengthen capacity at the school and district level to provide professional development and technical support so that a high degree of program implementation can be maintained at each school.
- ***Networking:*** The CRHDE holds an annual seminar for the network of CFL schools. School facilitators meet periodically for planning. A listserv has been created for CFL teachers to share ideas, and school staff receive research briefs and publications from the CRHDE on a regular basis.
- ***Implementation Review:*** Implementation is reviewed on an ongoing basis by principals, facilitators, and program staff. Additionally, program staff regularly collect implementation data to determine progress, areas that need improvement, and priorities for training.

Costs

The CFL program delivery system is built on existing resources and personnel at each school, so costs vary from site to site. Typically, resources are redeployed to provide one facilitator per school without requiring additional funds. The only added cost for most schools is pre-implementation training of school staff and ongoing technical assistance to support program implementation and evaluation. The estimated cost for planning, training, and ongoing technical assistance at a school with 500-600 students is $30,000 per school for the first year, $15,000 for the second year, and $10,000 for the third year.

Student Populations

CFL has been implemented in high-poverty, low-performing inner city and rural schools in geographically diverse locations. It has been implemented as a regular education model as well as an inclusive approach to educate children with special needs.

Special Considerations

To the extent possible, implementation of CFL involves the inclusion of students with disabilities in regular classes with special education support.

Selected Evaluations

Developer

Laboratory for Student Success. (1997). *Interim report: First-year implementation of the Community for Learning comprehensive school reform model.* Philadelphia: Author.

Wang, M. C., Oates, J., & Weishew, N. (1995). Effective school response to student diversity in inner-city schools: A coordinated approach. *Education and Urban Society, 27*(4), 484-502.

Wang, M. C., & Zollers, N. J. (1990). Adaptive instruction: An alternative service delivery approach. *Remedial and Special Education, 11*(1), 7-21. (focuses on ALEM, the instructional component of the Community for Learning Program)

Outside Researchers

Brookhart, S. M., Casile, W. J., & McCown, R. (1997). *Evaluation of the implementation of continuous progress instruction in the Fox Chapel Area School District 1995-1996.* Pittsburgh: Duquesne University.

Far West Laboratory. (1980). *Educational programs that work* (7th ed.). San Francisco: Author.

McDowell, F. E. (1986). Adaptive learning model fosters both equity and excellence. *School Administrator, 43,* 20-23.

(The latter two studies focus on ALEM, the instructional component of the Community for Learning Program.)

Sample Sites

Eighth Avenue Elementary School
727 Waverly Street
Houston, TX 77007
713-867-5200
Principal: Teresa LeNoir

Stetson Middle School
B Street and Allegheny Avenue
Philadelphia, PA 19134
215-291-4720
Principal: Lucy Rodriguez

Walker-Jones Elementary School
100 L Street, N.W.
Washington, DC 20001
202-724-4894
Principal: Antoinette Wells

For more information, contact:

Cynthia Smith, Director of Information Services
Laboratory for Student Success
Temple University Center for Research in Human Development and Education
1301 Cecil B. Moore Avenue
Philadelphia, PA 19122-6091
Phone: 800-892-5550
Fax: 215-204-5130
E-mail: lss@vm.temple.edu
Web site: http://www.temple.edu/LSS

Community Learning Centers (PreK-Adult)

IN BRIEF Community Learning Centers	
Developer	Wayne B. Jennings, Designs for Learning, St. Paul, Minnesota
Year Established	1992
# Schools Served (Jan. 1998)	8 (4 more to open in fall 1998)
Level	preK-adult
Primary Goal	to dramatically increase the achievement of all learners
Main Features	• powerful learning experiences • active learning environments • personal learning plan for each student • integrated social services • decentralized decision making
Results	no achievement results yet; positive results on attendance and parental satisfaction
Impact on Instruction	no prescribed curriculum; school acts as a broker in arranging learning experiences within and beyond its walls; teacher- and student-driven instruction
Impact on Organization/ Staffing	design works best in charter or contract schools; 20-30 days of staff development required; decisions about all aspects of budgeting and staffing made at school level
Impact on Schedule	CLCs open year round/extended hours
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parents involved in school governance, community collaborations, and educational experiences of children
Technology	substantial costs for initial technology investment; all learners and staff routinely use word processing, e-mail, spreadsheets, desktop publishing, and other applications
Materials	none required

Origin/Scope

Community Learning Centers (CLC) was created by Minnesota educator Wayne B. Jennings in 1992 as one of the original New American Schools designs. The model has been tested in eight schools in Minnesota, one of which is now attempting to implement fully all of its components. Four more CLC schools will open in fall 1998 (three in Minnesota, one in California).

General Description

The Community Learning Centers program is a comprehensive school design that aims to dramatically increase the achievement of all learners, preK-adult. Local ownership and local input into a CLC are crucial, and while the essential principles remain constant, there are significant variations in the way the design is adapted locally.

Curriculum is based on achieving standards and outcomes through powerful learning experiences. The school acts as the broker in arranging learning experiences within and beyond its walls for real world application. Curriculum is defined as all the experiences of the learner irrespective of place, time, or person.

Learning experiences feature modern learning principles and are child-centered, life-centered, and brain-based (that is, compatible with the power of the brain to assimilate and organize learning). Community Learning Centers emphasize active learning environments such as media centers, production studios, discovery centers, theaters of learning, labs, community-based learning, and work stations for various computer applications.

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Each learner has a personal learning plan (PLP) for recording goals, experiences to reach goals, and progress toward goals. The PLP defines each student's schedule of learning activities. Each learner has an advisor who meets periodically with the learner and parent(s) to review the PLP. The advisor has the authority to adjust the student's program as needed to meet learning goals. Students participate in decisions about the school program.

Decision-making is decentralized at CLC. Partnerships with other units of government, public and private agencies, early childhood programs, and post-secondary education are encouraged. Social services are integrated with education through agreements for collaborative services and shared costs, revenues, and location. Community Learning Centers, as headquarters for learning for the community, are open year round and extended hours. Adults are served through community education and other means, while parents and preschool children are served through early childhood and other family education programs.

Results

During the second year of CLC implementation under New American Schools funding, an external evaluation firm reported that some sites had made considerable progress in implementing the CLC design and that all sites, in general, found the design feasible. Barriers to implementation included union resistance, district staffing policies, lump sum budgeting, and the integration of community social services. Sites also reported that teachers had difficulty making some of the changes inherent in the design (e.g., basing curriculum at least in part on student questions).

The St. Paul Family Learning Center Charter School, which is implementing the full CLC model, is now in its second year of operation, serving 115 K-6 students. Data from its first annual report on attendance, teacher satisfaction, parent satisfaction, and other variables were quite positive. Data on student achievement were inadequate to yield firm conclusions.

Implementation

- ***Project Capacity:*** Educational consulting firm Designs for Learning, which managed the CLC project for New American Schools, is available to provide services. Plans are underway to establish a nationwide network of CLCs. Local educators will adapt the model to fit local needs with assistance from Designs for Learning and operate their school under terms of a supportive, franchise-type agreement. This includes assistance with school design, curriculum and instruction, and staff training.
- ***Faculty Buy-In:*** An official resolution of the school's site-based governing body is required as evidence of commitment to the CLC design.
- ***Initial Training:*** Prior to implementation, the CLC program needs to be customized to fit a school's particular situation. Initial training is provided by Designs for Learning staff during the several months leading up to the opening of the school. School stakeholders learn about CLC concepts, developing their own version of what the CLC will look like in their community.
- ***Follow-Up Coaching:*** Assistance in the form of staff development, consultation, and technical support is provided on-site and through electronic communications by Designs for Learning staff during the first two or three years of operation.

- ***Networking:*** Information on the CLC project will be available on the Designs for Learning Web site, currently under development. All CLC sites will be linked electronically for easy exchange of information and data.
- ***Implementation Review:*** Assistance evaluating the status of CLC implementation, including visits to the site at least quarterly, is provided by Designs for Learning staff.

Costs

In collaboration with groups that wish to establish CLCs, Designs for Learning develops implementation plans, including budgets, on a case-by-case basis. There are substantial costs for initial technology investment as well as planning and staff development necessary for the implementation of the new model. The designers have found it difficult to start a new school without at least $50-$60,000 in start-up funds, prior to receiving general student revenues. Over the long run, a CLC operates on the same financial resources available to other schools. Larger than usual expenditures on technology and staff development are covered by differentiating staffing, employing fewer licensed teachers and more aides and non-licensed support staff.

Student Populations

The CLC model can be adapted for implementation in any community. Implementation sites during New American Schools funding included schools in inner-city urban areas, in rural small towns, and on an Indian reservation. The Family Learning Center student population is roughly one third African American, one third Asian, and one third Caucasian.

Special Considerations

The CLC model features systemic change that affects all aspects of schools. It may be possible for schools to adopt elements of the model piecemeal (e.g., personal learning plans or brain-based learning strategies). However, to become a CLC a school must be ready to examine all of its operations, abandon old practices that are not producing results, and institute new methods based on the CLC design.

Selected Evaluations

Developer

Designs for Learning. (1995). *Community Learning Centers: Tomorrow's schools, today: Specifications, overview*. St. Paul, MN: Author.

Jennings, W. B. (1996). Community Learning Centers. In S. Stringfield, S. Ross, & L. Smith (Eds.), *Bold plans for school restructuring* (pp. 233-260). Mahwah, NJ: Lawrence Erlbaum Associates.

St. Paul Family Learning Center Charter School. (1997). *First Annual Report*. St. Paul, MN: Author.

Outside Researchers

Bodilly, S., Purnell, S., Ramsey, K., & Smith, C. (1995). *Designing New American Schools: Baseline observations on nine design teams* (Report No. DRU-680-1-NASDC). Santa Monica, CA: RAND.

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase*. Santa Monica, CA: RAND.

Miller, G. (1995). *Evaluation Report on the CLCs Project*. Minneapolis, MN: Change, Inc.

Sample Sites

St. Paul Family Learning Center Charter School
1355 Pierce Butler Route
St. Paul, MN 55104
612-644-5052
Director of Learning: Rod Haenke

For more information, contact:

David Alley, President
Designs for Learning
1355 Pierce Butler Route
St. Paul, MN 55104
Phone: 612-645-0200
Fax: 612-645-0240
Email: david@designlearn.com

Co-NECT Schools (K-12)

IN BRIEF Co-NECT	
Developer	BBN Corporation
Year Established	1992
# Schools Served (Jan. 1998)	58
Level	K-12
Primary Goal	improved achievement in core subjects
Main Features	• design-based assistance for comprehensive K-12 school reform • customized on-line/on-site training and personal support • national "critical friends" program • leadership processes for whole-school technology integration
Results	overall improvement in test scores relative to district trends
Impact on Instruction	emphasis on authentic problems and practical applications
Impact on Organization/ Staffing	organization of school into small learning communities ("clusters"); full-time facilitator preferred
Impact on Schedule	flexible block scheduling; common planning time for teachers
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	encouraged
Technology	significant investment required; schools need computers and Internet access for teachers (at least) in order to make the most of the products and services available on-line (Co-NECT does not provide equipment)
Materials	provided, both print and on-line

Origin/Scope

Co-NECT was founded in 1992 by members of the Educational Technologies Group at BBN Corporation. By January 1998 there were 58 schools in eight states.

General Description

Co-NECT helps schools work through a structured process of comprehensive school reform. The primary purpose is to boost academic achievement for all students in core subject areas including mathematics, reading, writing, science, and the social sciences. The design is based on a set of five benchmarks derived from best practices in some of the most effective schools in the United States. The benchmarks include:

- high expectations for all students and schoolwide accountability for results;
- schoolwide emphasis on practical application of academic knowledge to authentic problems;
- use of assessments that measure actual student and school performance;
- organization of the school into small learning communities (known as "clusters"); and
- sensible use of the best available technology for everyone.

Co-NECT provides a combination of on-site and on-line assistance aimed at helping each participating school implement these design benchmarks within a period of three years.

Schools that work with Co-NECT need to have computers in every classroom and on every teacher's desk and Internet access for teachers in order to make the most of the products and services available on-line. These computers are connected by a schoolwide local area network (LAN), with shared file storage, printers, and direct, high-speed access to the

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Internet. Some Co-NECT schools also have extensive video production and broadcast facilities.

The Co-NECT Exchange, the organization's Web site, delivers specialized professional training for teachers and leaders and supports the growth of a collaborative professional community among participating schools. The exchange offers a rich and growing array of tools, tele-collaborative projects and other curriculum resources, discussion areas, on-line training modules, and membership utilities. The site has been field-tested over a period of three years with thousands of teachers around the United States, and is undergoing continuous development.

Other offerings include: Co-NECT Critical Friends (a national school visitation and quality review program); Co-NECT Tech (a new program that helps school leaders design processes to integrate technology into the curriculum); and an annual technology conference.

Results

A number of Co-NECT schools around the country have posted gains on standardized test scores since becoming Co-NECT schools:

- The ALL School in Worcester, Massachusetts, has seen steady increases in all subject areas (both fourth and eighth grade) on state tests, including gains as high as 23% from 1994-1996.
- Campus Elementary School in Memphis, Tennessee, has posted gains in mathematics at grades 4, 5, and 6 and in science in grades 3, 4, 5, and 6.
- The Ohio State Proficiency Test is given every year to fourth and sixth graders. Last year, fourth graders at Roosevelt Elementary, a Co-NECT school in Cincinnati, showed improvement on every section of the test: reading, writing, math, science, and citizenship. Overall, Roosevelt gained an average of 9.4 points in the percentage of students in both fourth and sixth grade scoring "proficient" or better — almost three times the average district gain.
- At Campbell Drive Middle School in Dade County, Florida, the percentage of students scoring 3.0 or higher on Florida Writes!, the state writing assessment, is now up to 72%. This marks the third year in a row of improvement at Campbell Drive. Campbell Drive was the second most improved middle school in Dade County.
- All four Co-NECT elementary schools in Cincinnati posted overall gains in the percentage of students scoring "proficient" or higher on the Ohio Proficiency Test for 1997. The average gain for three of the four schools was above the district average. All four middle schools in Dade County and all six elementary schools in Memphis are doing comparatively better than district trends since beginning to work with Co-NECT.

Implementation

- ***Project Capacity:*** Headquarters in Cambridge, Massachusetts. One regional office in South Florida with additional regional offices planned (two to three per year). Co-NECT currently has 23 full-time employees, about half based in the field.

- ***Faculty Buy-In:*** Co-NECT provides an informational orientation and buy-in process leading to a faculty vote. Co-NECT requires 75% vote in favor.
- ***Initial Training:*** Co-NECT provides introductory workshops for the school leadership and school "design teams."
- ***Follow-up coaching:*** Local site directors (on-site professionals) conduct training workshops throughout the year and work directly with teams and individuals in the schools. Telephone and e-mail support is provided by site directors in other locations as well as by Cambridge-based staff.
- ***Networking:*** The Co-NECT Exchange (see General Description above), Co-NECT Critical Friends, and the annual technology conference provide opportunities for networking among participating schools.
- ***Implementation Review:*** Co-NECT closely monitors and regularly reviews the progress of implementation efforts.

Costs

For a faculty of 30: $50,000 the first year, $45,000 the second year, and $40,000 the third year. These fees cover on-site professional development, personal attention from Co-NECT site directors and support teams, membership in the Co-NECT Exchange and Co-NECT Critical Friends programs, consultation with members of the Co-NECT design team as needed, and involvement in national events such as teleconferences. Also, a full-time facilitator/liaison on the school staff is preferred.

When a district has four or more Co-NECT schools, Co-NECT will consider appointing a full-time local site director. Travel by Co-NECT staff is billed as accrued. Other costs include travel and hotel accommodations for staff to attend national Co-NECT events, and the cost of substitutes (to cover teachers during training). These costs do not include investments in computers and networking technology, which also are required.

Student Populations

Co-NECT has worked primarily with schools in large urban districts. Approximately 80% of students are African American or Hispanic, and 65% receive free or reduced lunch.

Special Considerations

Technology requirements include computers and high-speed Internet access for all staff.

Selected Evaluations

Developer

Working towards excellence: Results from schools implementing New American Schools designs. (1997). Arlington, VA: New American Schools.

Outside Researchers

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase.* Santa Monica, CA: RAND.

Additional evaluation information is available from Stephen Ross at the University of Memphis (901-678-3413).

Sample Sites

The ALL School
93 Woodland Avenue
Worcester, MA 01610
508-799-3562
Principal: Carol Shilinsky

Alton Elementary School
2020 Alton Street
Memphis, TN 38106
901-775-7430
Principal: Virginia McNeil

Dzantik'i Heeni School
10014 Crazy Horse Drive
Juneau, AK 99801
907-463-1899
Principal: Les Morse

For more information, contact:

Tricia Ferry
Co-NECT Schools
70 Fawcett Street
Cambridge, MA 02138
Phone: 617-873-5612
Fax: 617-873-2589
E-mail: Info@co-nect.bbn.com
Web site: http://co-nect.bbn.com

Core Knowledge (K-8)

IN BRIEF Core Knowledge	
Developer	E. D. Hirsch, Jr.
Year Established	1986
# Schools Served (Jan. 1998)	700+
Level	K-8
Primary Goal	to help students establish a strong foundation of core knowledge for higher levels of learning
Main Features	• sequential program of specific grade-by-grade topics for core subjects • rest of curriculum (approximately half) left for schools to design
Results	single school quantitative and qualitative data demonstrate improved student achievement and equity — specifically for students in lower performing schools
Impact on Instruction	instructional methods (to teach core topics) are designed by individual teachers/schools
Impact on Organization/ Staffing	minimal
Impact on Schedule	minimal
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes — though some schools have had difficulty finding materials to correspond with Core Knowledge topics
Urban	yes
Rural	yes
Parental Involvement	schools are expected to involve parents in planning and resource development
Technology	none required
Materials	detailed material provided

Origin/Scope

The Core Knowledge Foundation is an independent, non-profit, non-partisan organization founded in 1986 by E. D. Hirsch, Jr. The foundation's essential program, a core curriculum titled the Core Knowledge Sequence, was first implemented in 1990. By January 1998, it was being used in more than 700 schools in 42 states.

General Description

Core Knowledge is an approach to curriculum based on the work of E. D. Hirsch, Jr. and described in his books *Cultural Literacy* and *The Schools We Need and Why We Don't Have Them.* The focus of the Core Knowledge approach is on teaching a common core of concepts, skills, and knowledge that characterize a "culturally literate" and educated individual. The purpose of the Core Knowledge approach is to increase academic performance as demonstrated on national and state norm- and criterion-referenced tests, to help narrow the gap between academic "haves" and "have nots," and to build consensus among teachers, parents, and administrators.

Core Knowledge is based on the principle that the grasp of a specific and shared body of knowledge will help students establish strong foundations for higher levels of learning. Developed through research examining successful national and local core curricula and through consultation with education experts in each subject area, the Core Knowledge sequence provides a consensus-based model of specific content guidelines for students in the elementary grades. It offers a progression of detailed grade-by-grade topics of knowledge in history, geography, mathematics, science, language arts, and fine arts, so that students build

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on knowledge from year to year in grades K-8. Instructional strategies are left to the discretion of teachers.

The Core Knowledge sequence typically comprises 50% of a school's curriculum; the other 50% allows schools to meet state and local requirements and teachers to contribute personal strengths. Teachers are also expected to provide effective instruction in reading and mathematics. The Core Knowledge curriculum is detailed in the *Core Knowledge Sequence Content Guidelines for Preschool through Grade Eight* and illustrated in a series of books entitled *What Your (First-, Second- etc.) Grader Needs to Know.*

Parental involvement and consensus building contribute to the success of the Core Knowledge Sequence. Parents and community members are invited to be involved in obtaining resources, planning activities, and developing a schoolwide plan. The schoolwide plan integrates the Core Knowledge content with district and state requirements and assessment instruments. Additionally, parents and teachers are encouraged to cooperate in planning learning goals and lesson plans.

Results

A study conducted by Johns Hopkins University is currently in its third year. This study analyzes six established Core Knowledge schools, six Core Knowledge schools deemed promising implementation sites, and four matched control schools. The first year qualitative report outlined the benefits educators observed in the advanced Core Knowledge schools. Students appeared to gain self-confidence and were more interested in learning, and discipline problems decreased. Additionally, teachers described their work lives as more interesting and found that they worked collaboratively more often. Early quantitative data shows slight gains for Core Knowledge students in reading and math on the Comprehensive Tests of Basic Skills and slight gains on the Maryland School Performance Assessment Program in math, social studies, writing, and language use. Core Knowledge students scored worse than controls on science.

Additional studies of single Core Knowledge schools have demonstrated significant improvement in raising the scores of students of low socio-economic status and decreasing the achievement gap between advantaged and disadvantaged students. Data from the Paul H. Cale Elementary School, a Core Knowledge school in Virginia, showed much higher achievement than predicted for disadvantaged students (70% scored higher than national norm on the CAT).

The Nathaniel Hawthorne Elementary School in Texas has also achieved at higher than expected levels. Hawthorne is an inner-city school with a large Hispanic population and a 96% free and reduced lunch rate. Hawthorne adopted the Core Knowledge Sequence in the 1992-93 school year. The average reading pass rate for grades 3-5 in the district is 55%. Hawthorne students enter grade 3 with a 34 % pass rate. By grade 5, Hawthorne students have a 67% pass rate that far exceeds the district's 56% pass rate for grade 5. Gains also were observed in the math skills assessment. Similar results have been found in case studies in a variety of Core Knowledge schools in Massachusetts, Washington, and Colorado.

Implementation

- ***Project Capacity:*** Headquartered in Charlottesville, Virginia; prototype regional center at Trinity University in San Antonio, Texas; cadres of trainers in Texas, Florida, Maryland, Ohio, and Colorado.
- ***Faculty Buy-In:*** The school or school district must obtain the commitment of at least 80% of the teachers who will be involved in the implementation. Implementation requires full school participation for a minimum of three years. Teachers are expected to teach all of the topics in the Core Knowledge Sequence at the specified grade levels.
- ***Initial Training:*** Initial training consists of a three to five day (depending on district needs and resources) on-site intensive training for all teachers and administrators, spread over the first year of implementation. The training includes an overview of Core Knowledge, development of a schoolwide plan, advice on obtaining resources and parent involvement, and specific unit writing.
- ***Follow-Up Coaching:*** A variety of workshops, mentorships, and follow-up site visits are offered to help ensure successful implementation. Summer workshops are available focusing on integrating the Core Knowledge Sequence with local curricular guidelines, collaborative planning and lesson-writing sessions.
- ***Networking:*** Core Knowledge supports a Web site, publishes a quarterly newsletter, and hosts an annual national conference in March.
- ***Implementation Review:*** After receiving letters of commitment from the school demonstrating 80% support for the Core Knowledge Sequence, the school is recognized as a Core Knowledge school.

Costs

Initial training costs average around $6,000 in training fees and travel. The average training session is five days — although the session length is flexible depending on the requirements of the school. The initial first year material cost (Core Knowledge curriculum and additional books and materials) averages a minimum of $200 per teacher. The cost of additional material varies according to the resources already available to the school. The Core Knowledge membership fee is $10 per year. Teachers are encouraged to attend the annual conference and regional summer workshops.

Student Populations

Core Knowledge was developed to serve all children. Core Knowledge programs currently serve disadvantaged students, Title I schools, minority students, and English-language learners. Core Knowledge schools are established in rural, suburban and urban areas.

Special Considerations

Teachers must be willing to implement the Core Knowledge Sequence for three years and to develop and implement a sequential program of skills instruction in the areas of reading and mathematics. The school must develop a schoolwide planning document that contains the Core Knowledge topics and district/state standards.

Selected Evaluations

Developer

Marshall, M. (1996). *Core Knowledge sequence credited in test score boosts*. Charlottesville, VA: Core Knowledge Foundation.

Outside Researchers

Schubnell, G. (1996). Hawthorne Elementary School: The evaluator's perspective. *Journal of Education for Students Placed at Risk, 1*(1), 33-39.

Stringfield, S. & McHugh, B. (1997). *The Maryland Core Knowledge implementation: First year evaluation*. Baltimore: Johns Hopkins University, Center for Research on the Education of Students Placed at Risk.

Stringfield, S., Datnow, A., & Nunnery, J. (1997). *First-year evaluation of the implementation of the Core Knowledge sequence: Qualitative report*. Baltimore: Johns Hopkins University, Center for Social Organization of Schools.

Sample Sites

Hawthorne Elementary
115 West Josephine
San Antonio, TX 78212
210-733-1321
Principal: Linda Hollomon

Ridge View Elementary
7001 West 13th
Kennewick, WA 99337
509-734-3651
Principal: Ted Mansfield

Three Oaks Elementary
19600 Cypress View Drive
Fort Myers, FL 33912
941-267-8020
Principal: Vivian Posey

For more information, contact:

Constance Jones
Director of School Programs
Core Knowledge Foundation
801 East High Street
Charlottesville, VA 22902
Phone: 804-977-7550
Fax: 804-977-0021
E-mail: jonescore@aol.com
Web site: http://www.coreknowledge.org

Different Ways of Knowing (K-7)

IN BRIEF Different Ways of Knowing (DWoK)	
Developer	The Galef Institute
Year Established	1989
# Schools Served (Jan. 1998)	300+
Level	K-7
Primary Goal	raise students' academic achievement and improve their attitudes toward school
Main Features	• interdisciplinary arts-infused curriculum • development of multiple intelligences • promotion of collaborative learning and higher-order thinking • increase in independent research and engaged learning time
Results	external evaluations of DWoK schools in multiple states have reported significant gains on standardized test scores
Impact on Instruction	interdisciplinary instruction; thematic, inquiry-based, arts-infused teaching strategies
Impact on Organization/ Staffing	differentiated instruction; leadership training; support study group meetings
Impact on Schedule	time required for professional development workshops, collaborative planning and study
Subject-Area Programs Provided by Developer	yes (particularly social studies and history)
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	family cultures and community integrated into curriculum; parents included in orientations and workshops; family literacy support; partnerships with arts and community organizations
Technology	none required
Materials	provided by developer (including curriculum modules, teacher guides, children's literature, videotapes, software, and assessment resources)

Origin/Scope

Founded in 1989 by Los Angeles philanthropists Andrew G. Galef and Bronya Pereira Galef, the Galef Institute is a nonprofit educational organization whose primary goal is comprehensive school reform. The Different Ways of Knowing four-year pilot included 500 classrooms in five states. The Institute's school reform efforts currently serve more than 3,000 classrooms in 300 school communities in six states.

General Description

Different Ways of Knowing (DWoK) is a multi-year professional development program for teachers, administrators, and other stakeholders that provides an integrated approach to curriculum, instruction, assessment, and reporting. Recognizing that every child has talent and that children learn by doing, the DWoK curriculum provides clear and flexible guidelines for learner-centered classroom practice. Interdisciplinary, non-graded modules integrate social studies and history themes with mathematics, science, and the visual, performing, and media arts.

DWoK is a research-based and tested school reform initiative that attempts to engage and strengthen the linguistic, mathematical, artistic, and intuitive abilities of students in grades K-7. Specifically, it:

- Regards students as creative, capable learners and builds on their strengths
- Provides a framework for hands-on, student-centered learning that guides classroom teaching as well as continuous professional development

- Uses compelling themes to develop the multiple intelligences of children
- Provides the best in children's literature, reference materials, study prints, transparencies, audio- and videotapes, and software from various publishers
- Adapts instruction to include various symbol systems — not only language and numbers, but also the visual, performing, and media arts as learning tools
- Provides skill-building lessons in the context of inquiry-based learning
- Builds a classroom community, encourages shared responsibility for classroom management and learning, and promotes an understanding of democratic ideals
- Offers guidelines and resources to assess students' learning
- Invites active, collaborative reflection by both teachers and students
- Provides a common language for educators to use in creating an educational partnership among parents, school, district, and community

Results

DWoK has been studied by different independent research teams in two large-scale implementation trials. A National Longitudinal Study, led by UCLA's James Catterall, followed 1,000 children in four school districts in Los Angeles and Boston over three years between 1991 and 1994. A second study integrated three separate research projects led by researchers at the University of Louisville and the University of Kentucky. It compared the implementation of 24 DWoK schools in Kentucky to non-DWoK schools statewide from 1993 to 1995. The studies used various measures and instruments including standardized test scores, state assessment results, student writing samples, student grades, surveys of students and teachers, and systematic classroom observations.

The UCLA researchers found a positive correlation between students' tests and their number of years in DWoK, including:

- significant gains in vocabulary, comprehension, and other measures of language arts (8 percentile points higher on standardized tests for each year of participation)
- higher student scores on written tests of social studies content knowledge and higher student grades by one-half grade point
- increased cognitive engagement and intrinsic interest in the humanities
- increased levels of achievement and motivation over time, as opposed to patterns of eroding motivation for non-DWoK students.

The Universities of Louisville and Kentucky found:

- on the KIRIS statewide assessment of 4th grade students in 24 schools: 7% greater gains in reading and arts and humanities compared to schools statewide; 10% greater gains in social studies; 25% greater gains in math scores; and 7% greater gains in science over two years.
- greater involvement of students in their classrooms and more interest in their schoolwork.

Implementation

- ***Project Capacity:*** The Galef Institute's Los Angeles and Kentucky offices support initial school and district planning and training. Each participating site is matched with an interdisciplinary team of coaches. Over time, this team identifies and trains a local team of coaches.

- ***Faculty Buy-In:*** The faculty of each participating school agrees to (1) engage in a multi-year partnership with DWoK; (2) allocate time for professional development; (3) integrate reform initiatives, curriculum programs, and family programs at the classroom level; (4) work to integrate the DWoK philosophy and practices into their reform plans; (5) build an evaluation plan; (6) co-design a support structure and process for sustaining and spreading successful practices; and (7) designate school community and district DWoK advisory teams to work closely with the Galef Institute and participating schools.
- ***Initial Training:*** Professional development is designed in collaboration with the site in order to best meet local goals and needs. Each year a summer session is held for at least three days for teachers and administrators and is followed by three to four one-day professional development workshops conducted through the first year. Specialists, parents, and community members are included.
- ***Follow-Up Coaching:*** Schools receive monthly visits from a team of DWoK coaches, who are teacher leaders and artist educators. They observe in classrooms, offer feedback, give demonstration lessons, and facilitate group support study meetings. Over time, this team trains a local team of coaches to build long-term internal capacity.
- ***Networking:*** The Institute works to create multiple pathways for large-scale participation of teachers, administrators, specialists, families, and community members in building school reform partnerships with districts or clusters of schools in various regions across the country. The Institute also supports networking of teachers, administrators, parents, and community members through national leadership conferences, the DWoKnet Web site, and the quarterly newsletter, *Teacher-to-Teacher*. Free e-mail access is offered to all teachers registered on the Web site.
- ***Implementation Review:*** Coaches and site facilitators support the ongoing assessment and review of DWoK implementation. The Institute works with schools and districts to tailor an evaluation and documentation plan to meet their needs. The plan is designed by James Catterall of UCLA to provide multiple views of student learning, instructional development, and institutional change.

Costs

Costs are based on the partnership-building plan created with a given district or cluster of schools. The average cost is $35,000 per school for each year of the three-year course of study. For school faculties above 20 there are additional costs for participation, depending on the size and level of involvement. Other expenses include release time for professional development (an average of three days in the summer and four days during the year) and costs to cover teachers' time for curriculum planning, support study groups, and on-site coaching sessions. Any desired independent evaluation, additional leadership training, preservice partnerships with local universities and colleges, and/or summer school program support would add to program costs.

The Institute works closely with schools and school systems to identify diverse funding sources and integrate public as well as private funding resources. Through technical assistance and the creation of practical, written tools, the Institute helps administrators identify and maximize the resources available to them for reform.

Student Populations

DWoK is designed primarily for disadvantaged children and culturally and linguistically diverse school communities. DWoK has been implemented in Title I schools, urban schools, rural schools, and suburban schools.

Special Considerations

The Galef Institute wishes to work with a group or cluster of schools (within a single district or multiple districts in a state) to encourage networking across school communities. When they consider building a partnership with a school, they work on multiple levels to develop relationships with the district leadership, state leadership and community.

Selected Evaluations

Developer

Kentucky Department of Education and The Galef Institute-Kentucky Collaborative for Teaching and Learning. (1998). *Comparisons of schools receiving Title I funds and schools participating in Different Ways of Knowing Analysis of KIRIS Data for Kentucky Elementary Schools* Frankfort, KY: Author.

Outside Researchers

Catterall, J. S. (1995). *Different Ways of Knowing. 1991-94 longitudinal study of program effects on students and teachers.* Los Angeles: UCLA.

Catterall, J. S., Dreyfus, J. P., & DeJarnette, K. G. (1995). *Different Ways of Knowing: 1994-95 evaluation report.* Los Angeles: UCLA.

Hovda, R., & Kyle, D. (1997). *Different Ways of Knowing: Effects on elementary teaching and learning practices.* Louisville, KY: University of Louisville.

Wong, K., & Sogin, D. (1997). *Different Ways of Knowing: Effects on elementary teaching and learning practices.* Lexington: University of Kentucky.

Sample Sites

Contact the Galef Institute first, and staff will arrange for requesters to contact these or other sites:

Anderson Elementary School
4110 West 154th Street
Lawndale, CA 90260
Principal: Evelyn Chidsey

Harvey Milk Civil Rights Academy
4235 19th Street
San Francisco, CA 94114
Principal: Sandy Leigh

For more information, contact:

Sue Beauregard or Amy Berfield
The Galef Institute
11050 Santa Monica Blvd.
Third Floor
Los Angeles, CA 90025-3594
Phone: 310-479-8883
Fax: 310-473-9720
E-mail: sue@galef.org or amy@galef.org
Web site: http://www.dwoknet.galef.org/

Direct Instruction (K-6)

IN BRIEF Direct Instruction	
Developer	Siegfried Engelmann
Year Established	1968
# Schools Served (Jan. 1998)	150
Level	K-6
Primary Goal	improve academic performance so that by fifth grade, students are at least a year and a half beyond grade level
Main Features	• field tested reading, language arts, and math curricula • highly scripted instructional strategies • extensive training
Results	numerous large- and small-scale evaluations have found significant positive effects on student achievement in reading, language arts, and/or mathematics
Impact on Instruction	highly interactive lessons presented to small groups of students; flexible grouping of students by performance level; frequent assessment of student progress; no pull-out programs
Impact on Organization/ Staffing	some teachers may be asked to serve as peer coaches
Impact on Schedule	to facilitate cross-class grouping, schools must coordinate schedules so that all teachers at a particular grade level teach major subjects at the same time
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	not emphasized
Technology	none required
Materials	detailed materials provided by publisher

Origin/Scope

Direct Instruction has evolved from a theory of instruction developed by Siegfried Engelmann of the University of Oregon. Englemann's early works focused on beginning reading, language, and math and were published by Science Research Associates in 1968 under the trade name DISTAR (Direct Instruction System for Teaching And Remediation). Over the past three decades, the original curricula have been revised and new ones developed through sixth grade (plus remedial programs and science programs for higher grades). These curricula have been incorporated into the comprehensive school reform model known as the Direct Instruction Model, which has been implemented in some 150 schools nationwide. Direct Instruction curricular materials have been used in hundreds more schools.

General Description

Englemann's theory of instruction is that learning can be greatly accelerated in any endeavor if instructional presentations are clear, rule out likely misinterpretations, and facilitate generalizations. He and his associates have developed over 50 instructional programs based on this theory. Each program is shaped through field tryouts; student errors are evaluated and lessons revised prior to publication. The lessons are carefully scripted and tightly sequenced.

The comprehensive Direct Instruction Model incorporates teacher development and organizational components needed to optimize use of these programs. Through substantial training and in-class coaching, teachers in the lower grades learn to present highly interactive lessons to small groups. Students make frequent oral responses, and teachers monitor and correct errors immediately. Students are placed at appropriate instructional levels based on

performance, so those who learn rapidly are not held back and those who need additional assistance receive it. The model calls for inclusion of students with special needs except in the most extreme cases.

Although the Direct Instruction Model incorporates curricula for all areas, its reading, language arts, and math curricula can be implemented separately.

Results

The instructional design components incorporated in Englemann's theory of instruction have been the subject of numerous research studies over the past 30 years, beginning with Project Follow Through, a large-scale federal research project that funded and examined a variety of approaches to educating disadvantaged students. The Project Follow Through evaluation found that Direct Instruction was the most effective model in all three areas studied: basic skills (reading, language, math, spelling), cognitive skills, and affective behavior. Many other evaluations conducted since then also have found significant positive effects on student achievement in reading, language arts, or mathematics, as measured by a variety of standardized tests. Many of the program benefits appear to endure well past elementary school. Several studies have found that students who received Direct Instruction in grade school have higher high school test scores, graduation rates, and college acceptance rates.

Implementation

- ***Project Capacity:*** National Institute for Direct Instruction in Eugene, Oregon (a non-profit corporation); JP Associates (which uses the same curricula with a somewhat different training approach) in New York; various independent trainers around the country.
- ***Faculty Buy-In:*** 80% of teachers must agree to follow the specifications of the program and to discontinue any programs that conflict with the Direct Instruction approach.
- ***Initial Training:*** Direct Instruction's comprehensive training program begins with a one-week pre-implementation session.
- ***Follow-Up Coaching:*** Implementation managers from the sponsoring contractor visit each school at least four days per month for on-site coaching, classroom observation, and modeling. Managers address problems teachers are having in the classroom, propose specific solutions, monitor progress, and help manage the grouping of students. The sponsor also identifies and trains teachers in schools to serve as peer coaches.

  Direct Instruction Training tends to follow a standard timetable. The first year, teachers are trained in diagnostic and instructional strategies, the schoolwide discipline program, and a single subject (usually reading) or pair of related subjects (e.g., reading/spelling). The second year, they are trained in the rest of the curriculum, with continued attention to diagnosis and instruction. The third year, as they master the procedures, they are introduced to more sophisticated techniques for dealing with particularly hard-to-teach students.

- ***Networking:*** Each year there are several regional Direct Instruction conferences. Additionally, the Association for Direct Instruction (a non-profit organization in Eugene, Oregon) publishes the journal *Effective School Practices*.
- ***Implementation Review:*** Student academic progress and teacher mastery of Direct Instruction techniques are carefully monitored.

Costs

The cost of training services provided by a Direct Instruction provider for a school is usually $65,000 per year for five years. Curricular materials, purchased separately from Science Research Associates, a division of McGraw-Hill, cost approximately $125 per student. Additionally, schools must cover release time for teachers and coaches throughout the school year.

Student Populations

Direct Instruction is most frequently adopted by poor-performing schools in high poverty areas.

Special Considerations

Direct Instruction uses highly prescribed curricula and classroom procedures. Instruction is fast-paced and demands frequent interaction between teachers and students. During the first two years of implementation, coaches visit classrooms frequently. Developers estimate that schoolwide implementation of all curricular areas can take three years or more.

Selected Evaluations

Developer

Adams, G., & Engelmann, S. (1996). *Research on Direct Instruction: 20 years beyond DISTAR*. Seattle, WA: Educational Achievement Systems.

Englemann, S., Becker, W. C., Carnine, D., & Gersten, R. (1988). The Direct Instruction Follow Through Model: Design and outcomes. *Education and Treatment of Children, 11*(4), 303-317.

Gersten, R., Keating, T., & Becker, W. (1988). The continued impact of the Direct Instruction Model: Longitudinal studies of Follow Through students. *Education and Treatment of Children, 11*(4), 318-327.

Outside Researchers

Bereiter, C., & Kurland, M. (1981-82). A constructive look at Follow Through results. *Interchange, 12*, 1-22.

Stebbins, L. B., St. Pierre, R. G., Proper., E. C., Anderson, R. B., & Cerva, T. R. (1977). *Education as experimentation A planned variation model*. Cambridge, MA: Abt Associates.

White, W. A. T. (1988). Meta-analysis of effects of Direct Instruction in special education. *Education and Treatment of Children, 11*(4), 364-374.

Sample Sites

Arundel Elementary
2400 Round Road
Baltimore, MD 21225
410-396-1379
Principal: Lydia Lafferty

Hampstead Hill
500 South Linwood Avenue
Baltimore, MD 21224
410-396-9146
Principal: Sharman Rowe

Valley View Elementary
2465 West 4500 North
Roy, UT 84067
801-732-6019
Principal: Maurine Newton

For more information, contact:

Bob Fox
National Institute for Direct Instruction
805 Lincoln Street
Eugene, OR 97401
Phone: 541-485-1973
Fax: 541-683-7543

Bryan Wickman
Association for Direct Instruction
P.O. Box 10252
Eugene, OR 97440
Phone: 541-485-1293
Fax: 541-683-7543
(The ADI refers schools and districts to Direct Instruction consultants around the U.S.)

Kendra Feinberg
JP Associates
131 Foster Avenue
Valley Stream, NY 11580
Phone: 516-561-7803
Fax: 516-561-4066

Edison Project (K-12)

IN BRIEF Edison Project	
Developer	Chris Whittle and the Edison Project design team
Year Established	1991
# Schools Served (Jan. 1998)	25
Level	K-12
Primary Goal	to create innovative schools that operate at current public school spending levels and provide all students with an academically excellent education rooted in democratic values
Main Features	• contracts with school districts or charter schools • schools within schools • challenging curriculum (traditional and non-traditional approaches) • instruction tailored to meet individual students' needs • emphasis on computer technology
Results	some Edison schools are outperforming control schools in reading; high rates of parent and student satisfaction
Impact on Instruction	Edison designs 75% of schools' curricula; schools use the Success for All reading program and the University of Chicago math program
Impact on Organization/ Staffing	Edison is responsible for implementing the educational programs and the management systems (this includes hiring staff)
Impact on Schedule	longer school day and year; Edison schools may use a different daily schedule than other district schools
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	Parent Advisory Board; families meet with teachers quarterly; social services provided on-site
Technology	Edison equips each school with technology, including a computer for every teacher and student
Materials	broad range of curriculum materials provided as part of the design

Origin/Scope

The Edison Project was founded by Chris Whittle in 1991. The first Edison partnership schools opened in the summer of 1995 in Sherman, Texas; Wichita, Kansas; Mount Clemens, Michigan; and Boston, Massachusetts. The Edison Project now (as of January 1998) has 25 partnership schools in eight states.

General Description

The Edison Project is a privately sponsored effort to create innovative schools that operate at current public school spending levels and that provide all students, regardless of economic or social circumstances, with an education that is rooted in democratic values, that is academically excellent, and that prepares them for productive lives.

The Edison Project establishes partnership schools either in contract with the local school district or as part of a charter school initiative. In the schools it contracts with, the Edison Project is responsible for implementing the educational program, technology plans, and management systems. It is also accountable to the communities it serves for the performance of the schools. In Edison partnership schools, authority must be as decentralized as possible, and each decision-making unit must be accountable for results.

The Edison Project intends to enable high school graduates to perform college-level work. It also strives to foster in every student an appreciation of the arts, a commitment to

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health and fitness, an understanding of right and wrong, and a desire to participate responsibly in a democratic society.

The design is composed of ten integral parts:

1. *Schools Organized for Every Student's Success:* smaller schools within schools;
2. *Better Use of Time:* longer school day and year;
3. *Rich and Challenging Curriculum:* world class standards; education in humanities and arts, mathematics and science, ethics, practical skills, and health and fitness (Edison uses the University of Chicago School Mathematics Program and the Success for All reading program);
4. *Teaching Methods That Motivate:* multiple instruction techniques;
5. *Careful Assessment That Provides Real Accountability:* tied to standards; multiple assessment tools;
6. *A Professional Environment for Teachers:* a portable computer for every teacher; extensive professional development;
7. *Technology for an Information Age:* a computer in every student's home; highly equipped schools;
8. *New Partnership with Parents:* regular communication between teachers and parents;
9. *Schools Tailored to Your Community:* curriculum tailored to meet local needs; and
10. *Backed by a System That Serves:* support, guidance, and resources from the Edison national headquarters.

Results

Early testing data from the first four schools show some positive results. After the 1995-96 school year Edison matched its schools with control schools and compared results. The tests, which were given or overseen by the Educational Testing Service, showed that elementary students at Edison schools in Kansas and Michigan showed substantial gains in reading. These studies also showed that students who began at an Edison school in kindergarten or first grade were consistently developing stronger reading skills than similar students locally. Reading results at the other two Edison schools were inconclusive. The Edison school in Massachusetts had no matching control group, although its students' reading performance was comparable to that of local schools and other Edison schools. The control group in Texas performed better than the Edison students, but the groups were not well matched.

The testing closely followed the evaluation program for the Success for All reading program, which Edison schools use. The reading tests included the Peabody Picture Vocabulary Test, the Durrell Oral Reading scale, and the Woodcock Reading Mastery Tests.

Other indicators show that parent and student satisfaction is high. Edison schools have a high rate of parent involvement; a 94% student attendance rate; and a student mobility rate below 10% annually. Edison schools are making strong progress toward implementing the design as measured against a detailed set of performance standards.

Implementation

- ***Project Capacity:*** National headquarters located in New York and regional representatives in major geographical regions.

- ***Faculty Buy-In:*** Edison schools are schools of choice. Students and staff must choose to be there.
- ***Initial Training:*** Professional development begins shortly after contracts are signed for those teachers/principals that have already been recruited. It then intensifies during the summer before opening day with six weeks of preparation for all teachers.
- ***Follow-up Coaching:*** Ongoing professional development provided in the form of mentoring by colleagues, teaching by professional development specialists from the Edison Project, peer tutoring by teachers at other partnership schools, and independent instruction from sources identified by teachers themselves.
- ***Networking:*** Online communications system, including a Web site, connects all members of the Edison national network of schools.
- ***Implementation Review:*** The Edison Project ensures that its school design is faithfully implemented through a system of school performance standards and implementation guidelines designed to measure progress.

Costs

Essentially, school districts pay the Edison Project the same amount per pupil as they spend on other pupils in the district. For example, if the average per-pupil operating revenue in a district is $5,000, Edison receives $5,000 for each student who chooses to enroll in its schools (plus whatever Title I, special education, and other funding would normally flow to the school). Edison itself makes a considerable initial investment in each school to cover computers and other start-up costs. Over time, the company hopes to operate efficiently enough to recoup its initial investment and make a profit.

Student Populations

The Edison Project is designed to meet individual needs, including those of students who are gifted and talented, students with disabilities, and those from whom English is a second language. Edison student populations closely mirror the demographics of the districts in which they are located.

Special Considerations

Parents, teachers and communities must choose to have an Edison school work with their community. School districts and teacher unions must understand that Edison manages the school, including making scheduling, budgeting, and/or staffing decisions that may differ from those made at other public schools within the district.

Selected Evaluations

Developer

Edison Project. (1997). *Annual report on school performance.* New York: Author.

Outside Researchers

External evaluations of the Edison Project have been conducted by the Gordon S. Black Corporation and the Educational Testing Service. Information on findings from these studies are detailed in the *Annual Report on School Performance*.

Sample Sites

Boston Renaissance Charter School
250 Stuart Street
Boston, MA 02116
617-357-0900
Principal: Ester Gliwinski

Dodge-Edison Elementary School
4801 West 2nd Street
Wichita, KS 67212
316-942-6679
Principal: Daniel Loon

For more information, contact:

Debra Doorack
The Edison Project
521 Fifth Avenue, 16th Floor
New York, NY 10175
Phone: 212-309-1600
Fax: 212-309-1604
E-mail: debra_doorack@edisonproject.com
Web site: http://www.edisonproject.com

Expeditionary Learning Outward Bound (K-12)

IN BRIEF Expeditionary Learning Outward Bound (ELOB)	
Developer	Outward Bound, USA
Year Established	1992
# Schools Served (Jan. 1998)	47
Level	K-12
Primary Goal	high achievement for all students
Main Features	• challenging learning expeditions that involve authentic projects and fieldwork • high expectations for all students • shared decision-making • regular review of student achievement and level of implementation
Results	9 of 10 third-year ELOB schools have shown significant improvement on standardized tests
Impact on Instruction	interdisciplinary projects; frequent journeys out of the classroom for fieldwork
Impact on Organization/ Staffing	at least 3 hours of team planning time for teachers weekly; 15-20 days of professional development per teacher per year
Impact on Schedule	requires large, flexible blocks of time for in-depth investigation in school and in the field; students stay with same teacher for more than one year
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes (2 schools)
Parental Involvement	many opportunities for parents and community to be involved in students' learning expeditions
Technology	none required
Materials	provided

Origin/Scope

Formed in 1992, Expeditionary Learning Outward Bound (ELOB) is based on the principles of Outward Bound, which educator Kurt Hahn founded in 1941. There are 47 ELOB schools in 13 states as of January 1998.

General Description

Expeditionary Learning focuses teaching and learning toward enabling all students to meet rigorous academic standards and character goals. Curriculum, instruction, assessment, school culture, and school structures are organized around producing high quality student work in learning expeditions — long term, in-depth investigations of themes or topics that engage students in the classroom and in the wider world through authentic projects, fieldwork, and service.

Learning expeditions are designed with clear learning goals that are aligned with district and state standards. Ongoing assessment is woven throughout each learning expedition, pushing students to higher levels of performance.

In Expeditionary Learning schools, teachers, students, and school leadership build a culture of high expectations for all students. Teachers work collaboratively in teams, with regular common planning time to plan interdisciplinary expeditions, critique each others' expedition plans, and reflect on student work and teacher practices to improve curriculum and instruction. To strengthen relationships in the classroom, students stay with the same

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teacher or team of teachers for more than one year. Teachers and school leadership participate in a sequence of professional development activities.

Schools assess their progress each year and use ELOB benchmarks to drive improvement.

Results

By the third year of implementation, nine of ten Expeditionary Learning schools have shown significant improvement in their students' scores on the standardized tests given in their districts. Some schools show improvement in the first year of implementation: A Portland, Maine, middle school, for example, increased its average score on the Maine Educational Assessment by 45 points in reading and 65 points in math — compared to statewide increases of 5 points in reading and 25 points in math. A Dubuque elementary school raised its average score from the 39th to the 80th percentile on the Iowa Test of Basic Skills.

ELOB also has resulted in higher levels of student engagement and motivation. Attendance at all Expeditionary Learning schools averages over 90%.

Implementation

- ***Project Capacity:*** ELOB's main offices are in Cambridge, Massachusetts, and Garrison, New York, and staff are stationed on-site in nine states. There are 11 Outward Bound schools and centers, which serve as regional offices and training centers.
- ***Faculty Buy-In:*** At least 80% of the faculty and all of the school's leadership should endorse adoption of the design.
- ***Initial Training:*** A two-day leadership institute focuses school leadership on the structural and cultural components of the Expeditionary Learning design. The institute assesses the school's readiness to implement Expeditionary Learning and helps plan schedules, student groupings, teacher teams and related issues. This is followed by a five-day all-faculty institute in which teachers develop and plan learning expeditions.
- ***Follow-Up Coaching:*** ELOB provides at least 20 days of on-site technical assistance and professional development opportunities every year for the first three years to help teachers align their learning expeditions with state standards and adopt or adapt instructional tools and strategies compatible with the ELOB design. A five-day summer institute helps teachers plan learning expeditions. In addition, professional development events are scheduled throughout the school year.
- ***Networking:*** National leadership conference and a national conference for teachers; site visits and seminars at other ELOB schools; monthly newsletter and e-mail network.
- ***Implementation Review:*** ELOB national staff work with schools to conduct an annual self-review and a three-year Expeditionary Learning review by external reviewers. Expeditionary Learning benchmarks track the degree and quality of implementation.

Costs

For schools with 25 or fewer teachers, ELOB costs approximately $3,150 per teacher in the first year, including $2,000 per teacher to cover ELOB's fee for professional development, technical assistance, and materials and approximately $1,150 per teacher for stipends, travel, and expedition materials. For schools with more than 25 teachers, the per-teacher first-year cost decreases to $2,150 for each teacher after the first 25. Second year costs are typically 10-20% lower, depending on the initial level of implementation, and third year costs 10-20% lower again. Costs continue to decrease in subsequent years.

Student Population

ELOB serves all students, including disadvantaged students, minority students, and English language learners. The program has been implemented in Title 1 schools and primarily in urban areas.

Special Considerations

Schools should provide for 15-20 days of professional development time for each teacher and budget for at least three hours of common team planning time per week.

Selected Evaluations

Developer

Working towards excellence: Results from schools implementing New American Schools designs (1997). Arlington, VA: New American Schools.

Outside Researchers

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase*. Santa Monica, CA: RAND.

Sample Sites

King Middle School
92 Deering Avenue
Portland, ME 04102
202-874-8290
Principal: Mike McCarthy

Raphael Hernandez School
61 School Street
Roxbury, MA 02118
617-635-8190
Principal: Margarita Muniz

Rocky Mountain School of Expeditionary Learning
3755 South Magnolia Way
Denver, CO 80237
303-756-2193
Director: Rob Stein

For more information, contact:

Meg Campbell
Expeditionary Learning Outward Bound
122 Mt. Auburn Street
Cambridge, MA 02138
Phone: 617-576-1260
Fax: 617-576-1340
E-mail: meg_campbell@elob.ci.net
Web site: http://hugse1.harvard.edu/~elob

Foxfire Fund (K-12)

IN BRIEF Foxfire	
Developer	Eliot Wigginton
Year Established	1966
# Schools Served (Jan. 1998)	not applicable (model works teacher to teacher); teachers in 37 states
Level	K-12
Primary Goal	to help teachers implement an academically sound, learner-centered, community-oriented approach to education
Main Features	• collaborative teaching and learning environment • connections between the classroom and surrounding communities • audience beyond the teacher for student work • activities to meet curricular mandates grow out of learner interests
Results	small-scale evaluations and case studies report increased test scores for low- to middle-percentile students; qualitative research on teacher practices reports high satisfaction and success rates
Impact on Instruction	peer teaching; active learning; small group work; increased student responsibility for learning
Impact on Organization/ Staffing	minimal
Impact on Schedule	minimal
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	community/learner defined
Technology	community/learner defined
Materials	community/learner defined

Origin/Scope

The Foxfire Fund is an independent, non-profit organization founded in 1966 by Eliot Wigginton. Through national memberships, regional networks, local alliances, and other programs, Foxfire works with teachers in 37 states.

General Description

Foxfire supports teachers in the implementation of a learner-centered approach to education that is academically sound and promotes continuous interaction between students and their communities to help students find fulfillment as creative, productive, critical citizens. This approach is referred to as the Foxfire Approach, which is a way of thinking that guides teachers' development of classroom strategies and methods — rather than a way of "doing."

The Foxfire Approach is not a "program" implemented at each site. Rather, each teacher uses the Foxfire Approach to respond to the unique opportunities and challenges of his or her teaching environment. This response builds a classroom that is an authentic reflection of the culture of the school and community, curricular mandates, and the needs and interests of the students served. The Foxfire Approach is outlined in a set of Core Practices:

1. The work teachers and learners do together is infused from the beginning with learner choice and design.
2. The role of the teacher is that of facilitator and collaborator.
3. The academic integrity of the work teacher and learners do together is clear.
4. The work is characterized by active learning.
5. Peer teaching, small group work, and teamwork are all features of classroom activity.

6. Connections between the classroom work, the surrounding communities, and the world beyond the communities are clear.
7. There is an audience beyond the teacher for learner work.
8. New activities spiral out of the old, incorporating lessons learned from past experiences, building on skills and understandings that can now be amplified.
9. Imagination and creativity are encouraged.
10. Reflection is an essential activity that takes place at key points throughout the work.
11. The work teachers and learners do together includes rigorous, ongoing assessment.

Teachers who use the Foxfire Approach strive at all times to incorporate as many of the Core Practices as possible. Further, as teachers implement the approach over time, their understanding is refined and leads to ongoing self-directed development.

Results

Research based on small-scale evaluations and case studies has demonstrated that students whose teachers use the Foxfire Approach score as well or better on state-mandated tests as those students who use other approaches. The largest gains on standardized tests were made by students in the middle and lower percentiles. Qualitative reports from teachers and additional research has demonstrated that students show marked improvement in several areas, including attendance, behavior, class participation, and homework completion.

Because Foxfire works teacher-to-teacher, research on student achievement in control schools has not been possible. On the other hand, since Foxfire focuses mainly on teacher training and a contextual approach to student learning, research into the effectiveness of its teacher training is significant. Research completed by the Project Evaluation and Research Group of Lesley College found the course to be an "extraordinary success" and reported that the participants "experienced a significant shift in the way they had previously thought about the work they do with children."

Implementation

- ***Project Capacity:*** Foxfire's national offices are located in Mountain City, Georgia. A variety of teacher support structures are in place, including regional networks, local teacher alliances, national membership, and whole school sites. Classroom teachers participate in the development of national programs and serve as trained instructors, coordinators, and facilitators of Foxfire courses and projects.
- ***Faculty Buy-In:*** Foxfire works only with those teachers who choose to participate. Most often, individual teachers or small teacher teams sign up for a course offered in their area. When a school or district sponsors a Foxfire course, all participants freely elect to participate.
- ***Initial Training:*** Foxfire offers a variety of workshops and courses. The introductory course, *The Foxfire Level One*, requires 50 hours of class time and follow-up meetings over the school year. This course is usually offered during the summer months, but may be scheduled during the school year or over a semester to meet teacher or school needs.
- ***Follow-Up Coaching:*** Following the *Level One* course, at least two follow-up meetings are held. These may include visits to individual teachers' classrooms. When working with a school site, two or more site visits occur. Additional support

programs, including regional networks and local alliances, provide sustained support to teachers in their own communities or states and often include on-site support from teacher mentors or partners.

- ***Networking:*** Foxfire publishes a quarterly journal and a quarterly newsletter, and it supports a Web site. Foxfire holds an annual meeting of Foxfire teachers from around the country as well as an annual meeting of regional network coordinators.
- ***Implementation Review:*** Since Foxfire works directly with individual teachers, not schools, no school implementation review is conducted.

Costs

Foxfire offers a variety of teacher support services, and fees vary depending on service type. The introductory course, the *Foxfire Level One*, usually costs from $350-$550 per teacher. The course is often available for graduate credit or for continuing professional education credit.

If a school's faculty and administration choose the Foxfire Approach to guide their work, programs are developed in collaboration with the faculty and administration and are designed to work within the school's financial constraints. A schoolwide *Level One*, including 50 hours of class time, two follow-up visits, and all materials and supplies would cost between $10,000-$13,000. *Pre-Level One* workshops designed to introduce the Foxfire Approach are available for $1,000-$4,000.

Student Populations

The Foxfire Approach has been implemented in grades K-12 and in all subject areas. The Approach has been used with special needs, at-risk, homeless, culturally diverse, minority, and English-language learners in a variety of urban, suburban, rural, and isolated settings.

Special Considerations

The Foxfire Approach demands a willingness to fundamentally change the relationships among teachers, learners, their community, and the curriculum. In a school setting that includes teachers with diverse teaching styles and personalities, the Foxfire Approach allows individual teachers to implement the approach at their own levels and supports sustained professional development for all faculty members who choose to participate.

Selected Evaluations

Developer

Teets, S. (1996) *Use of Foxfire approach and student achievement*. Mountain City, Georgia: The Foxfire Fund, Inc.

Outside Researchers

Baldassare, C. (1997) *An evaluation of impact: The Foxfire Level One course*. Cambridge, Massachusetts: Lesley College, Program Evaluation and Research Group.

Baldassare, C. (1997) *An evaluation of impact: Understanding the developmental process of level one trained teachers*. Cambridge, Massachusetts: Lesley College, Program Evaluation and Research Group.

Sample Sites

Bayview Elementary School
325 West Merrick Rd.
Freeport, NY 11520
516-867-5255
Contact: Pat Molloy

Calexico High School
1030 Encinas Avenue
Calexico, CA 92213
760-357-7440
Contact: Harold Brown

Elk City Elementary
P.O. Box 259
Elk City, Idaho 83525
208-842-2218
Contact: Susie Borowicz

For more information, contact:

Christy Stevens
Coordinator of Teacher Support Services
Foxfire Fund
P.O. Box 541
Mountain City, GA 30562
Phone: 706-746-5828
Fax: 706-746-5829

High Schools That Work (9-12)

IN BRIEF High Schools That Work	
Developer	Southern Regional Education Board in Atlanta, Georgia
Year Established	1987
# Schools Served (Jan. 1998)	Over 700
Level	9-12
Primary Goal	to increase the achievement of career-bound students by blending the content of traditional college prep studies with quality vocational and technical studies
Main Features	• upgraded academic core • common planning time for teachers to integrate instruction • higher standards/expectations
Results	sites participating in 1994 and 1996 assessments showed significant improvement in reading and math scores and widened the gap in achievement scores between career-bound students at HSTW sites and vocational students nationally
Impact on Instruction	sites are expected to end low-level courses for all students and increase the use of engaging instructional strategies
Impact on Organization/ Staffing	sites align with middle schools and postsecondary institutions; more teachers work together
Impact on Schedule	use of larger blocks of instructional time
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	no specialized practices noted
Urban	yes
Rural	yes
Parental Involvement	parents are expected to help their children select a schedule that reflects HSTW principles
Technology	no specific technology required
Materials	specific materials are suggested to guide schools in making changes

Origin/Scope

High Schools That Work (HSTW) is an initiative of the Southern Regional Education Board (SREB)-State Vocational Education Consortium that began in 1987. More than 700 schools in 21 states are members of the HSTW network.

General Description

High Schools That Work is a whole-school, research- and assessment-based reform effort that offers a framework of goals and key practices for improving the academic, technical, and intellectual achievement of career-bound high school students. It provides intensive technical assistance, focused staff development, and a nationally recognized yardstick for measuring program effectiveness. HSTW promotes a changed school environment as a context for implementing 10 key practices: high expectations; challenging vocational studies; increasing access to academic studies; a program of study that includes four years of English, three of math, and three of science; work-based learning; collaboration among academic and vocational teachers; students actively engaged; an individualized advising system; extra help; and keeping score (using assessment and evaluation data to foster continuous improvement). HSTW sets high expectations, identifies a recommended curriculum to meet the expectations, and sets student performance goals benchmarked to the National Assessment of Educational Progress (NAEP).

Three main ideas lay the foundation of HSTW: (1) academic and vocational teachers, principals, and counselors work together to establish unity of vision, a common process for

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reorganizing the school, and a plan for doing so; (2) teachers and school leaders are empowered to accomplish their goals when they share expertise and learn from each other; and 3) assessment, evaluation and feedback should drive the process and implementation of reform. The HSTW framework builds support and collaboration among school and district leaders, teachers, students and families for raising expectations for a more challenging and meaningful high school program of study. SREB and its partners assist high schools in customizing the HSTW framework into action plans for creating more personalized learning environments leading to improved student motivation and performance.

Results

All sites are required to participate in the HSTW Assessment, which is based on the curriculum frameworks for the National Assessment of Educational Progress and involves achievement tests in reading, mathematics, and science of senior students about to complete a vocational or technical concentration. HSTW sites that participated in the assessment in 1994 and again in 1996 showed significant improvement in average reading and mathematics scores. The percentage of career-bound students meeting the HSTW performance goals increased from 33% in 1994 to 43% in 1996 in reading, and from 34% to 44% in mathematics. Furthermore, schools that were in the network longer showed more evidence of putting the key practices into place and had higher performance than did new sites.

Qualitative information collected through five case studies of improving sites, technical assistance visits, and annual progress reports suggests that when sites make progress in implementing the key practices, they tend to get the following results: improved achievement and higher attendance, graduation, retention, and postsecondary attendance rates. Likewise, dropout rates and discipline referrals tend to decline. High achieving schools in the top 25% of HSTW sites with diverse student populations show significant improvement in curriculum, instructional practices, and performance indicators. These high-performing schools most accurately reflect the school and classroom practices of HSTW.

Implementation

- ***Project Capacity:*** HSTW has 21 member states, as well as many other sites nationwide that implement the program. Staff members provide HSTW services (technical assistance, staff development, and assessment) from SREB headquarters in Atlanta. Member states designate a coordinator for networks of HSTW sites and create technical assistance networks of HSTW experts within the state. In addition, each HSTW site has a designated coordinator for activities at the local level.
- ***Faculty Buy-In:*** In HSTW member states, sites must receive approval to join HSTW from the state department of education. Sites must also demonstrate that: (1) the majority of faculty are committed to supporting the HSTW framework; (2) they will conduct at least a five-year school improvement plan as detailed by the HSTW program; and (3) the school will participate in the HSTW assessment program. Sites in non-member states must also demonstrate that two thirds of the faculty are committed to supporting the HSTW framework.
- ***Initial Training:*** Training includes a two-day site development workshop (for sites in non-member states, the workshop is on-site for the whole faculty; for sites in member

states, 7-10 member teams attend a statewide site development workshop); a four-day annual national HSTW conference; a national leadership forum for state policy-makers; a three-day retreat for system/school leaders; a three-day technical assistance leadership training for district and state leaders; and two weekend workshops topics such as integrated learning in support of the key practices. In member states, sites will work through state departments of education to contract with providers approved by the state and SREB for more intensive services.

- ***Follow-Up Coaching*:** In year one, sites receive at least two follow-up visits addressing the site action plan. SREB and state departments of education (in member states) will broker customized technical assistance and training services. In year two, sites receive a three-day team technical assistance visit. In year three, sites receive assistance in using data to update their action plans and receive customized technical assistance and training.
- ***Networking:*** HSTW holds an annual national staff development conference, provides teleconferences that link developing HSTW schools with successful sites, and publishes a quarterly newsletter. Other publications aimed at increasing the effectiveness of HSTW sites are also available. General information about HSTW is available on the SREB Web site.
- ***Implementation Review:*** SREB collects information from technical assistance visits, a biennial assessment, a teacher survey report, and annual progress reports submitted by schools.

Costs

Three years of HSTW implementation cost $25,000-$35,000 per year. These costs include services such as a site development conference, planning, technical assistance visits, staff and curriculum development, training and resource materials, team conference registration, and the assessment package and an evaluative study. (These are fees for sites in non-member states for site-specific services. Sites in member states have the option of contracting for site-specific services with providers approved by the states and SREB.) Other expenses include funds for stipends and substitute teachers, new kinds of curriculum materials, and travel expenses for state, regional or national training.

Student Populations

HSTW targets all career-bound youth, but students at every level can benefit.

Special Considerations

HSTW requires that sites work to replace the general track, raise graduation requirements, participate in the HSTW assessment program, develop a site action plan, and use assessment data to update their action plan.

Selected Evaluations

Developer

Emanuel, D., Joyner, N., Bradby, D. Greech, B., & Bottoms, G. (1997). *Working together to change practice and accelerate student learning*. Atlanta: Southern Regional Education Board; Berkeley, CA: MPR Associates.

Bottoms, G., & HSTW Staff. (1996). Case Studies: Hoke County High School (North Carolina); North Laurel High School (Kentucky); Sussex Technical High School (Delaware); Walhalla High School (South Carolina); Swansea High School (South Carolina). Atlanta: Southern Regional Education Board. Unpublished study.

Bottoms, G., & HSTW Staff. (1997). *High Schools That Work* (Research Brief Number 1 and Number 9). Atlanta: Southern Regional Education Board.

Outside Researchers

Smith, T., Hayward, B., Powell, J., & Padillo, C. (1998). *Identification and assessment of integrated curricular approaches which promote school reform*. Washington, DC: Research Triangle Institute for the Office of Vocational and Adult Education, U.S. Department of Education.

Bottoms, G., & Mikos, P. (1995). *Seven most-improved high schools that work sites raise achievement in reading, mathematics and science*. Atlanta: Southern Regional Education Board.

Bradby, D. (1998). *Study of improving versus declining sites* (draft). Berkeley, CA: MPR Associates.

Sample Sites

Hoke County Schools
310 Wooley Street
Raeford, NC 28376
910-875-4106
Associate Superintendent: Jeff Moss

Lexington School District 4
P.O. Box 569
Swansea, SC 29160
803-568-3886
Superintendent: J. Franklin Vail

Sussex Technical High School
P.O. Box 351
Georgetown, DE 19947
302-856-0961
Director of Support Services: Patrick Savini

For more information, contact:

Gene Bottoms, Senior Vice President
Southern Regional Education Board
592 Tenth Street, N.W.
Atlanta, Georgia 30318-5790
Phone: 404-875-9211
Fax: 404-872-1477
E-mail: gene.bottoms@sreb.org
Web site: http://www.sreb.org

High/Scope Primary Grades Approach to Education (K-3)

IN BRIEF High/Scope	
Developer	David P. Weikart
Year Established	1970
# Schools Served (Jan. 1998)	100
Level	K-3
Primary Goal	to provide children with effective, developmentally sound learning experiences in all curriculum areas and to be sensitive to their backgrounds, strengths, and interests
Main Features	• small group instruction • active learning • learning centers • observational and portfolio assessment • manipulative materials • technology integration
Results	students in program often have significantly higher scores on standardized achievement tests
Impact on Instruction	see Main Features
Impact on Organization/ Staffing	none
Impact on Schedule	none
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	program actively encourages parent and community involvement in workshops, classrooms, and other ways
Technology	4-6 computer stations and appropriate software (list provided) recommended for each classroom
Materials	teacher guides, video tapes, student assessment, CDs and records

Origin/Scope

High/Scope Educational Research Foundation was founded in 1970 by David P. Weikart (then of Ypsilanti Public Schools) as a not-for-profit educational research, training, and program development organization. In its first year, High/Scope's K-3 program was active in 10 schools in six states. As of January 1998, more than 100 schools across the country have adopted the High/Scope elementary approach.

General Description

Built on the principles and practices of active learning, the High/Scope approach to education encompasses all aspects of children's development and involves teachers and parents in supporting children's emerging intellectual, physical, social, and emotional skills and abilities.

The curriculum, which has its roots in High/Scope's validated preschool program, provides guidelines for creating a classroom learning environment that includes designated activity areas furnished with materials, supplies, and equipment. The daily schedule provides children with opportunities to work with a variety of manipulative materials, formulate practical problems, and make thoughtful efforts to solve them.

A group of K-3 learning goals called *key experiences* is defined in the curriculum. The key experiences in language and literacy, mathematics, science, music, and movement provide a framework for sequenced instructional activities, daily teacher planning, and assessment of individuals and groups.

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High/Scope views learning as a social experience involving reciprocal interactions between children and adults, and it offers children many experiences that require cooperative work and the use of effective communications skills.

The curriculum's plan-do-review process provides an organizational framework for children's work in the activity areas and allows children to generate learning initiatives. In the daily plan-do-review sequence, children choose, organize, and evaluate learning activities and share the results of their experiences with their peers. The child-initiated activities of the plan-do-review process provide teachers with insight into children's interests and levels of development while also helping children develop a sense of responsibility and empowerment that contributes to their lifelong competence and self-esteem.

Results

In a study comparing achievement test scores of children in High/Scope classrooms at three elementary schools to children in non-High/Scope classrooms (a total of 3,073 children) over a three-year period (1988-91), researchers found significant advantages in favor of the High/Scope children. Out of a total of 40 composite score comparisons at the three sites over the three years of the study (including reading, language, mathematics, science, and social studies on the Comprehensive Test of Basic Skills, the Iowa Test of Basic Skills, and the California Achievement Tests), the High/Scope groups scored significantly higher on 22 and significantly lower on none.

Additionally, researchers from the Stanford Research Institute in Menlo Park, California, found higher levels of child initiative and goal-directed child activity in High/Scope than in non-High/Scope classrooms. For example, High/Scope children spent more time interacting with other children while engaged in individual or joint work.

Implementation

- ***Project Capacity:*** High/Scope has 45 trainers who work on-site with teachers and administrators.
- ***Faculty Buy-In:*** High/Scope works in schools that are supportive of the model, but it does not require a formal vote by school staff.
- ***Initial Training:*** A one-week preservice training involving the entire school staff (parents also are invited to attend) provides a general overview of the program.
- ***Follow-Up Coaching:*** Staff training is accomplished through a series of on-site inservice training sessions over a three-year period. High/Scope trainers visit sites at least three times a year to conduct one-day workshops, observe classroom activities over several days, and present feedback to teachers.
- ***Networking:*** Several opportunities exist for networking including the annual High Scope Registry Conference held each spring, regional conferences, a High/Scope publication called *Resource* published three times a year, and a High/Scope Web site.
- ***Implementation Review:*** After each site visit, the field consultant or trainer writes a report using the High/Scope Elementary Program Implementation Profile. The report, which synthesizes classroom observations and recommended follow-up for individual teachers, is reviewed by the school and by High/Scope supervisors. Reviews are conducted no less than three times during the school year.

Costs

Project cost is negotiated on an individual basis to account accurately for the number of classrooms in a project and travel costs associated with a particular site. However, a typical charge for a three-year, on-site inservice training contract for a school that contains eight K-3 classrooms would be as follows:

- consulting fee for 15 site visits over three school years: $35,700
- curriculum guides and recordings for eight classrooms: $4,000
- workshop materials: $750
- registration fees for six local staff to attend High/Scope Registry Conference over three years: $1,800
- estimated travel and subsistence costs for consultant: $14,900.

Overall, first-year costs typically total $21,716, second-year costs $17,716, and third year costs $17,716. The three year total to implement High/Scope is $57,148.

Student Populations

High/Scope serves a broad spectrum of students from various socioeconomic backgrounds — from upper middle incomes to Indian reservations to urban environments. Many of the students in schools that implement the High/Scope approach qualify for Title I dollars. High/Scope also has experience working with bilingual students.

Special Considerations

No special equipment or materials are required beyond computers and the developmentally appropriate manipulative and print materials that should be present in all good K-3 classrooms. However, classrooms must be rearranged into activity areas.

Selected Evaluations

Developer

Schweinhart, L. J. (1993). *Validation of the High/Scope K-3 Curriculum* (Proposal to the Program Effectiveness Panel, U.S. Office of Education). Ypsilanti, MI: High/Scope Foundation.

Schweinhart, L. J., & Wallgren, C. R. (1993). Effects of a Follow Through program on school achievement. *Journal of Research in Childhood Education, 8*, 43-56.

Outside Researchers

The Public School 92, Manhattan, Follow Through Program (Submission to Joint Dissemination Review Panel). (1979). New York: Public School 92, Manhattan, Follow Through Program.

Stallings, J. A., & Kaskowits, D. H. (1974). *Follow Through classroom observation evaluation 1972-1973*. Menlo Park, CA: Stanford Research Institute.

Sample Sites

Bessie Hoffman Elementary School
50700 Willow Road
Belleville MI 48111
Phone: 734-484-3157
Principal: Marilyn Goodsman

Putnam Heights School
633 West MacArthur
Eau Claire WI 54701
Phone: 715-839-2838
Principal: Jane Johnson

West Point School
P.O. Box 96
West Point CA 95255
Phone: 209-293-4255
Supervisor: Linda Gonzales

For more information, contact:

Charles Wallgren
High/Scope Educational Research Foundation
600 North River Street
Ypsilanti, Michigan 48198
Phone: 734-485-2000
Fax: 734-485-0704
E-mail: info@highscope.org
Web site: www.highscope.org

League of Professional Schools (K-12)

IN BRIEF League of Professional Schools	
Developer	Carl Glickman, University of Georgia
Year Established	1989
# Schools Served (Jan. 1998)	175
Level	K-12
Primary Goal	help schools become democratic institutions focused on student learning
Main Features	• charter, or schoolwide constitution • covenant, or statement of school's principles of learning • action research, or systematic means of studying effects of programs on student learning
Results	improved student achievement in some high implementation schools
Impact on Instruction	depends on collective decisions of staff
Impact on Organization/ Staffing	participatory governance (thus, teachers will have a much greater say in schoolwide decision making)
Impact on Schedule	depends on collective decisions of staff
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	encouraged, but ultimately depends on collective decisions of staff
Technology	depends on collective decisions of staff
Materials	depends on collective decisions of staff

Origin/Scope

The League of Professional Schools was founded in 1989 by Carl Glickman of the University of Georgia. Initially, the League had 22 member schools. At present there are 105 member schools in Georgia. Independent Leagues have also been established in Florida (12 schools), Nevada (17 schools) and Washington state (41 schools).

General Description

The primary purpose of public education in America, Glickman believes, is to prepare students to become productive citizens of our democracy. To realize that purpose, schools must change in three ways: (1) they themselves must become democratic institutions; (2) they must focus democratic decision making on student learning; and (3) they must determine whether their decisions and actions are actually helping students learn. The League of Professional Schools has developed a three-dimensional framework to help schools become democratic institutions focused on student learning:

- ***Charter:*** The charter is essentially the school's constitution. It outlines the structures, conditions, and procedures for democratic, schoolwide decision making that will bring the covenant (see below) to life. Although schools will come up with many different models of decision making (representative democracy or direct participation, for example), they must follow three guiding principles: everyone can be involved; no one has to be involved; and once decisions are made, everyone supports them.
- ***Covenant:*** The covenant is a statement of a school's principles of learning. Derived through a democratic process as outlined in the charter, the covenant guides school priorities regarding curriculum, instruction, assessment, professional development, scheduling, and resource allocation.

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- ***Action Research:*** Action research provides a systematic way for schools to study the effects of their educational programs on student learning. It involves collecting and analyzing data and, just as important, using those data to inform the school's future decisions about teaching and learning. Thus decisions are driven by information, not mere opinion.

Results

A 1997 study found a correlation between high implementation of the League's approach and improved test scores in elementary schools (specifically, ITBS scores and state Curriculum-Based Achievement scores). Other than this study, neither League nor outside researchers have conducted systematic evaluations of student achievement as measured by standardized test scores. Studies conducted by the League have focused primarily on implementation, with information on achievement emerging only anecdotally. In general, these studies have found that most member schools have instituted participatory governance structures and identified schoolwide instructional focuses, with corresponding changes in teacher attitude and classroom practice. Schools also have implemented comprehensive action research plans that involve collecting and analyzing data and taking action based on those data. Data for some schools indicate increases in student grades and test scores, improvements in student writing as measured by school-generated rubrics, reductions in referrals and suspensions, and/or improvements in attendance.

Implementation

- ***Project Capacity:*** Headquarters at the University of Georgia; separate organizations in Florida, Nevada, and Washington.
- ***Faculty Buy-In:*** 80% of faculty must support membership.
- ***Initial Training:*** Each prospective member school sends a team of six (including the principal) to a two-day orientation. Schools that become members have three other opportunities for training each school year: a two-day conference in the fall and two single-day follow-up conferences in the winter and spring. As with the orientation, schools send teams to these sessions. The League also offers summer institutes that focus on emerging issues.
- ***Follow-Up Coaching:*** Once a year, a League staff member, university associate, or school practitioner visits each school to observe, coach, and reflect with teachers on progress and problems. League staff members or school practitioners provide additional training and coaching upon request of member schools. The League also has developed an Information Retrieval System to provide schools with information on topics related to schoolwide goals.
- ***Networking:*** The fall, winter, and spring conferences serve as networking opportunities as well as training sessions. The League also publishes a newsletter and is constructing a Web site.
- ***Implementation Review:*** The purpose of the annual on-site visit described above is to help member schools examine their implementation process. On-site visitors review the school's plan, interview key people and groups in the school (including students), and provide the school with a summary of what they learned.

Costs

The League charges an annual membership fee of $1,000. This fee entitles schools to send teams of six teachers to the fall, winter, and spring conferences. It also covers the one-day on-site visit by a League staff member, unlimited access to the Information Retrieval System, telephone consultations, and newsletters. Other costs to schools include travel expenses and release time for teachers to attend conferences.

Student Populations

League membership ranges from inner city schools in Atlanta to rural schools in southern Georgia.

Special Considerations

The League does not offer schools a ready-made curriculum or set of instructional practices. Rather, it fosters the establishment of participatory governance structures through which individual school staffs determine their own instructional focus and means of achieving it. Consequently, it may require significant changes in governance and a high degree of collegiality among teachers and administrators.

Selected Evaluations

Developer

Calhoun, E. F., & Allen, L. (1994). *Results of schoolwide action research in the League of Professional Schools.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, April.

Glickman, C. D., Allen, L., & Lunsford, B. (1992). *Facilitation of internal change: The League of Professional Schools.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April.

Harkreader, S. A., & Henry, G. T. (1997). *A league of their own: Evaluating school improvement reforms.* Paper presented at the 22nd Annual Georgia Education Research Association, Atlanta, November.

Outside Researchers

None available.

Sample Sites

Barton Chapel Road Elementary
2329 Barton Chapel Road
Augusta, GA 30906
706-796-4995
Principal: Missoura Ashe

Jaspar County High School
1289 College Street
Monticello, GA 31064
706-468-2227
Principal: Jimmy Jordan

Snellville Middle School
3155 East Pate
Snellville, GA 30278
770-972-15-30
Principal: Mike Moody

For more information, contact:

Lew Allen
League of Professional Schools
124 Aderhold Hall
University of Georgia
Athens, GA 30602
Phone: 706-542-2516
Fax: 706-542-2502
E-mail: lewallen@uga.cc.uga.edu
Web site: under development

Modern Red Schoolhouse (K-12)

IN BRIEF Modern Red Schoolhouse	
Developer	Hudson Institute
Year Established	1992
# Schools Served (Jan. 1998)	43
Level	K-12
Primary Goal	to combine the rigor and values of little red schoolhouse with latest classroom innovations
Main Features	• challenging curriculum • emphasis on character • integral role of technology • high standards for all • individual education compact for each student
Results	test scores of students in MRSh elementary schools have increased at multiple sites
Impact on Instruction	teachers vary time and teaching approaches to ensure that all students pass "watershed assessments" in order to advance from primary to intermediate to upper divisions
Impact on Organization/ Staffing	technology specialist must be added to the staff
Impact on Schedule	teachers may need to reschedule their day to accommodate interdisciplinary lessons and long-term projects
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parents agree to help take responsibility for student performance through Individual Education Compacts; community helps define character development component
Technology	sophisticated computer technology is required
Materials	provided

Origin/Scope

Modern Red Schoolhouse (MRSh) was developed in 1992 by the Hudson Institute, a private, non-profit research organization. There are 43 MRSh schools in 11 states.

General Description

MRSh works in partnership with schools throughout the country to reinvent the virtues of the little red schoolhouse in a modern context.

At an MRSh school, students master a rigorous curriculum, develop character, and promote the principles of democratic government. These elements of the traditional red schoolhouse are then combined with innovative teaching methodologies and student groupings, flexibility in organizing instruction and deploying resources, and advanced technology as a learning and instructional management tool.

The core principle of MRSh is that all students can and will reach high academic standards. Mastery of subject matter is the only acceptable goal, regardless of a child's background, learning style, or pace. Because students learn at different rates and in different ways, instructional methodologies and time spent on lessons vary. This way, students progress through the curriculum in the ways that are best suited to their individual strengths and abilities.

MRSh strives to help all students achieve high standards through the construction of a standards-driven curriculum; traditional and performance-based assessments; effective organizational patterns and professional-development programs; and effective community-involvement strategies.

The primary tool for monitoring continuing progress is the Individual Education Compact, an agreement negotiated by the students, parents, and teacher. This "educational road map" establishes measurable goals, details parent and teacher responsibility for helping the student achieve, and lists services the school, parents, or community should provide.

Results

Across multiple sites, the test scores of students in Modern Red Schoolhouse elementary schools have increased. At Hansberry Elementary in the Bronx, for example, 52% of students passed New York's essential skills test in reading in 1995 and 82% passed in math, up from 22% and 47%, respectively, two years earlier. At Rozelle Creative and Performing Arts School in Memphis, all students met or exceeded 90% of the district median percentiles on the Tennessee Comprehensive Assessment Program (TCAP) in 1996. In addition, fourth grade writing proficiency scores improved by more than 100%. Average gains in the proportion of students meeting Texas minimum expectations for MRSh schools in San Antonio were greater than district-wide average gains in 80% of the comparisons by grade (3, 4, 5) and subject (math, writing, reading) for 1996-97.

In a 1995 survey of all elementary teachers at MRSh sites, the majority of teachers reported that the curriculum (90%), the design (66%), and the use of computers (90%) had a positive impact on student achievement, among other findings. Additionally, 100% of teachers reported that they are strongly satisfied with their role as professionals.

Implementation

- ***Project Capacity:*** MRSh has 12 full-time staff and 20 consultants. MRSh will station a field manager on-site in any metropolitan area with eight schools engaged in full implementation. Otherwise, MRSh relies on staff, senior consultants, and National Faculty (MRSh trainers) who are based in the following states: Florida, Indiana, Massachusetts, New York, Pennsylvania, Texas, and Tennessee.
- ***Faculty Buy-in:*** 80% of staff must vote in favor of adopting the design.
- ***Initial Training:*** The first two years, MRSh consultants are on-site approximately 30 days a year, including summer training. Basic training for all staff is approximately 5 days. Training for members of MRSh task forces is 1 day; and leadership team training is 3 days per year.
- ***Follow-Up Coaching:*** In years two through four, MRSh schools receive on-site technical assistance for 20 days per year in curriculum development and task force activities. In addition, MRSh staff and consultants are always available via hotline, fax, and e-mail to all schools, all times. A full-time field manager is permanently on-site where there are eight or more schools in a metropolitan area. In the second and third years, National Faculty members are available locally.
- ***Networking:*** Annual administrator's conference, newsletter and other teacher oriented publications, and Web site.
- ***Implementation Review:*** To assess implementation, MRSh conducts an annual survey of teachers and a biannual survey of students in fourth and eighth grades. In addition, MRSh senior staff conduct site visits and review benchmarks with participating sites, and all training programs are routinely evaluated by participants.

Costs

A technology coordinator needs to be hired (half-time the first year and full-time thereafter). Substantial computer technology is needed. The costs for that will vary depending on existing equipment and school size. The average cost will range from $25,000 to more than $300,000 over a three-year period. Each school will need $30,000 to $80,000 to provide 10 to 30 days of technical assistance per year, depending on enrollment and location. Teacher stipends or equivalent for five days in the summer and five to eight professional development days during the academic year also will need to be funded.

Student Populations

MRSh has served disadvantaged and minority students, as well as English-language learners. The design has been implemented in urban, rural and Title I schools.

Special Considerations

None.

Selected Evaluations

Developer

Working towards excellence: Results from schools implementing New American Schools designs. (1997). Arlington, VA: New American Schools.

Outside Researchers

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase.* Santa Monica, CA: RAND.

Sample Sites

Maverick Elementary School
107 Raleigh Place
San Antonio, TX 78201
210-735-5461
Principal: Billy Terrell

Robert Lee Frost Elementary
5301 Roxbury Road
Indianapolis, IN 46226
317-226-4106
Principal: Dr. Sara Hindman

Rozelle Elementary School
933 Roland
Memphis, TN 38114
901-722-4612
Principal: Dr. Vivian Dillihunt

For more information, contact:

Karen White
Production Manager
Modern Red Schoolhouse
208 23rd Avenue North
Nashville, TN 37203
Phone: 615-320-8804
Fax: 615-320-5366
E-mail: kwhite@mrsh.org
Web site: http://www.mrsh.org

Montessori (PreK-8)

IN BRIEF Montessori	
Developer	Maria Montessori
Year Established	1907
# Schools Served (Jan. 1998)	3,000+
Level	conventionally, ages 3-12 (some ages 0-14)
Primary Goal	to help each child reach his or her fullest potential
Main Features	• multi-age groups • self-correcting, manipulative learning materials • open time and free choice of activity • work matched to child's developmental level • interdisciplinary curriculum • learning driven by child's interest
Results	Montessori students consistently outperform their peers in reading and math; even those who attend only Montessori preschool continue to outscore peers in reading and math into the upper elementary grades
Impact on Instruction	teachers learn and implement a comprehensive, integrated approach to child development and the psychology of learning
Impact on Organization/ Staffing	full-time program coordinator; paraprofessional classroom assistants
Impact on Schedule	morning and afternoon blocks of open, uninterrupted work time
Subject-Area Programs Provided by Developer	yes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	orientations, discussions, open houses, observations, publications
Technology	none required
Materials	specialized learning materials replace textbooks, workbooks, and dittos

Origin/Scope

Montessori education was founded by Maria Montessori, who opened her first "children's house" (school) in 1907 in Rome. Today in the United States, there are more than 3,000 private Montessori schools and close to 200 public schools (including 35 charter schools) with Montessori-styled programs. The Association Montessori Internationale (AMI), founded by Maria Montessori in 1929, maintains Montessori educational principles and disseminates Montessori education throughout the world.

General Description

Montessori is a comprehensive educational approach from birth through adolescence based on the observation of children's needs. It incorporates an understanding of children's natural learning tendencies as they unfold in "prepared environments" for multi-age groups (0-3, 3-6, 6-9, 9-12, and 12-14). Montessori in public schools is typically implemented as a "magnet" school option. In addition, there are 35 charter schools, and some federally-funded Head Start programs use Montessori as their educational component. Class numbers typically range from 25 to 30 students per teacher and paraprofessional.

The Montessori environment contains specially designed, manipulative "materials for development" that invite children to engage in learning activities of their own individual choice. Under the guidance of a trained teacher, children learn by making discoveries with the materials, thus cultivating concentration, motivation, self-discipline, and a love of learning. The curriculum is interdisciplinary and interactive.

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In a Montessori classroom, independent activity constitutes about 80% of the work while teacher-directed activity accounts for the remaining 20%. The special environments also offer practical occasions for developing social relationships through free interaction. The materials themselves invite activity and are self-correcting. When a piece does not fit or is left over, the child easily perceives the error without any adult "correction." The child solves problems independently, building self-confidence, analytical thinking, and the satisfaction that comes from accomplishment.

Parent involvement is encouraged through parent orientations, discussion groups, open houses, observations, and publications.

Results

Montessori magnet schools have a track record of having accomplished the goals of desegregation, parental choice, and student achievement. They typically rank in the upper one-third of the schools in their district on achievement test scores, and they usually reflect the ethnic and racial makeup of their communities.

In a 1991 study by Carol Takacs, professor of educational psychology at Cleveland State University, graduates of the Montessori Head Start program at the Marotta Montessori Schools of Cleveland who had entered the Cleveland Public Schools were studied in relation to their public school peers. California Achievement Test reading scores for the Marotta graduates over three years averaged more than 12 percentage points higher than those of the total district population. Tim Duax (1989) studied the 1987 and 1988 graduates of a Milwaukee public-school Montessori program spanning ages 4 to 11. Duax asked 27 middle-school teachers in three middle schools to assess 15 randomly-selected Montessori graduates in comparison to peers in the same middle school with no Montessori background. The teachers gave the Montessori-prepared sample above-average ratings in relation to their peers on the following characteristics on the survey: using basic skills, following directions, turning in work on time, listening attentively, asking provocative questions, adapting to new situations, being responsible, showing enthusiasm for class topics, being individualistic, and exhibiting multicultural awareness.

Implementation

- ***Project Capacity:*** Because the name "Montessori" is not copyrighted, there are many independent Montessori training programs, schools, and providers that share the Montessori philosophy and instructional approach but are not united under a common fiscal or organizational agency.
- ***Initial Training:*** There are many independent Montessori teacher training programs with differing standards. The majority of public Montessori schools require the credentials of either the Association Montessori Internationale (AMI) or the American Montessori Society (AMS). AMI offers teacher training at 16 institutes around the United States and 18 abroad, in addition to on-site training contracts with public schools. AMS offers training at approximately 50 U.S. sites. AMI or AMS training typically lasts one full-time academic year.
- ***Follow-up Coaching:*** Many training programs offer follow-up visits and/or seminars for first-year teachers by training personnel. Many schools employ a full-time program coordinator who is experienced in Montessori education.

- ***Networking:*** Opportunities abound, notably through conferences and publications of AMI, AMS, and the North American Montessori Teachers' Association (NAMTA). There are a number of Web sites, listservs, conferences, and newsletters devoted to the Montessori philosophy.
- ***Implementation Review:*** AMI and AMS both offer school affiliation programs that include on-site consultation/review by experienced implementers.

Costs

Training costs per teacher are approximately $5,000-$6,000. The costs of funding an ongoing Montessori program do not usually exceed costs associated with the operation of any other elementary school program, apart from the initial set-up costs as each age level is phased in. Each Montessori classroom has the following start-up costs and general maintenance expenses:

- Montessori materials: $17,000-$25,000
- Shelving, small tables, chairs: $4,000-$6,000
- Miscellaneous equipment and books: $1,000-$2,000
- Annual maintenance (consumables): $800

Student Populations

Montessori "magnet" schools typically serve racially and socio-economically diverse populations in large urban school districts. However, in its 90-year history, Montessori has been successfully implemented in urban, suburban, and rural settings, with all socio-economic levels, in a wide variety of cultures around the world.

Special Considerations

Montessori materials are one of the philosophy's most important aspects. Many classrooms require the purchase and use of specially made Montessori materials. They should, however, be seen as textbook and workbook substitutes that will not have to be replaced, provided the teacher encourages their proper use.

Selected Evaluations

Developer

Duax, T. (1989). Preliminary report on the educational effectiveness of a Montessori school in the public sector. *The NAMTA Journal, (14)2, 56-62.*

Takacs, C. (1993). Marotta Montessori Schools of Cleveland follow-up study of urban center pupils years 1991 and 1992. (Unpublished paper, Cleveland State University).

Outside Researchers

Karnes, Merle, et al. (1978). *Immediate, short-term and long-range effects of five preschool programs for disadvantaged children.* Paper presented at the American Educational Research Association annual meeting, Toronto, Canada.

Karnes, M., Shwedel, A. & Williams, M. (1983). A comparison of five approaches for educating young children from low-income homes. In *As the twig is bent: lasting effects of preschool programs* (pp. 163-169). Hillsdale, NJ: Lawrence Erlbaum Associates.

Sample Sites

Denison Montessori
Elementary School
1821 South Yates
Denver, CO 80219
303-934-7805
Principal: Martha Urioste

MacDowell School
1706 West Highland Blvd.
Milwaukee, WI 53233
414-933-0088
Principal: John Schmuhl

Elementary II Montessori
5015 Garfield
Kansas City, MO 64130
816-418-2600
Principal: Frank Vincent

For more information, contact:

David Kahn
Montessori Public School Consortium, and
North American Montessori Teachers' Association (NAMTA)
11424 Bellflower Road
Cleveland OH 44106
Phone: 216-421-1905
Fax: 216-421-8193
E-mail: staff@montessori-namta.org
Web site: http://www.montessori-namta.org (NAMTA)
http://www.amshq.org/mont.html (American Montessori Society)
http://www.ami.edu (Association Montessori Internationale)

Onward to Excellence (K-12)

IN BRIEF Onward to Excellence	
Developer	Northwest Regional Educational Laboratory
Year Established	1981
# Schools Served (Jan. 1998)	over 1,000
Level	K-12
Primary Goal	help schools build capacity through shared leadership for continuous improvement in schools
Main Features	• school leadership teams • two-year, 10-step improvement process • school profiles (data on student achievement) • effective practices research
Results	improved student achievement at high implementation schools
Impact on Instruction	depends on decisions of leadership team
Impact on Organization/ Staffing	leadership team composed of principal, teachers, and (sometimes) parents, students, or district representatives
Impact on Schedule	depends on decisions of leadership team
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parents often serve on leadership teams; input of parents and community members sought for key decisions
Technology	depends on decisions of leadership team
Materials	materials provided to guide schools through the 10-step process

Origin/Scope

Onward to Excellence (OTE) was developed at the Northwest Regional Educational Laboratory in the early 1980s. The program was piloted in 14 schools in three states between 1981 and 1984, then made available on a for-fee basis to schools across the country. Since OTE was developed, the improvement process and training program have undergone two major updates. To date over 1,000 schools have undergone OTE training.

General Description

There are two goals embedded in OTE: (1) to develop the capacity in schools to engage in continuous improvement, and (2) to improve student performance in at least one locally important goal area. OTE brings a broad base of research on effective practice into the school improvement process to maximize the potential for increases in student learning.

At each participating school, a school leadership team composed of the principal, selected school staff, community members, and students (secondary only) is formed to lead the school and community through the improvement process. An external support team (including representatives from local universities, the central office, and other schools) is established to collect data and help monitor improvement. Finally, a facilitator is appointed at the school or district level to assure that the process moves forward.

The process itself has 10 steps organized into three phases:

- ***Setting Direction:*** (1) An initial assessment is conducted to determine the degree of focus in the school. (2) A school profile of student performance is developed and the school community engages in dialogue to (3) establish one or two broad school improvement goals.

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- ***Planning Action:*** The school community (4) studies research-based practices related to their school improvement goal(s), (5) reviews their current practice in relationship to the research, and (6) decides what to change to improve student learning in their school improvement goal(s) area. Work on highly productive practices, such as mapping the school's curriculum against local, state, and national standards, begins immediately. Next, the leadership team with full participation of the school community (7) develops an implementation plan.
- ***Taking Action:*** The school community (8) puts their plan into action. Resources are identified, professional development is organized, and all members of the school community implement agreed-upon changes in practice. During implementation, (9) progress is checked frequently.

The final step (10) is renewal: actions that move the school from OTE to sustaining continuous improvement on their own. The leadership team facilitates a process through which the school community analyzes progress, reflects on what has worked, adjusts the improvement process accordingly, and determines next steps in an ongoing effort to improve student achievement.

Results

Selected OTE schools across the country have witnessed significant improvements in student achievement. At an OTE elementary school, for example, CTBS math scores for grades 2-5 increased over a five-year period from 52 to 75, and reading scores improved almost as much. And at an OTE high school, Functional Literacy Exam scores (a composite of reading, writing, and mathematics) increased over a three-year period from 795 to 818, leapfrogging both district and state scores. A study of OTE schools in Mississippi found that high implementation schools focusing on reading showed steady gains and outperformed comparison schools. However, the same study also found that high implementation is relatively infrequent and that achievement scores in OTE schools as a whole changed little over the course of the study.

An earlier study of OTE schools across the Northwest region found that OTE had a positive impact on roles and relationships in schools and districts, including more collegiality, better communication, increased staff involvement, shared leadership, and greater commitment. OTE also led to changed practices in schools and classrooms, and school staff members reported progress toward or achievement of their improvement goals (though actual progress as measured by student performance data was less positive).

Implementation

- ***Project Capacity:*** OTE headquarters are located at the Northwest Regional Educational Laboratory. Organizations across the country (e.g., state departments of education, education service centers) are granted the discretionary right to use the OTE process and materials when one or more members of the organization has developed full capacity to provide OTE training and technical assistance services.
- ***Faculty Buy-In:*** The local school board, superintendent, key central office staff, principals, school staff, and community must learn about the OTE process and make a commitment to full participation in training and implementation.

- ***Initial Training:*** The initial training program consists of seven workshops spread over two years. The first workshop is for school and central office administrators, teacher leaders, community members, and representatives from an external support agency. All subsequent workshops are for school leadership teams, facilitators, and external support teams. Each workshop is between one and two days in length and focuses on specific aspects of the improvement process.
- ***Follow-Up Coaching:*** Coaching for school leadership teams follows each workshop and is done primarily by the school improvement facilitators. OTE trainers provide coaching as needed to the facilitators.
- ***Networking:*** OTE supports a Web site and hosts annual Trainer Update Workshops. Agencies providing OTE training and assistance are encouraged to facilitate networking among school leadership teams, support teams, and staff.
- ***Implementation Review:*** Collecting data about implementation is the responsibility of the external support team and the leadership team at each school. Data on implementation of the process and plans, positive changes in learning and teaching practices, and changes in student performance is collected and reviewed at least twice each year.

Costs

For schools contracting with NWREL and located within the lab's service region (Alaska, Idaho, Montana, Oregon, and Washington), the fee for all seven workshops plus technical assistance is $15,000 plus travel expenses for the NWREL trainer. That single fee can cover up to six schools, provided they meet for training in a common place. (In other words, if six teams attend, the fee is $2,500 per school). For schools and districts outside the NWREL service region, the fee increases to $16,500 plus travel expenses for the trainer. Additional known costs include 0.25 FTE per school for a school improvement facilitator; release time for team members (usually eight days per year for between three and six teachers); and time for the full faculty to participate in improvement and professional development activities (at least six days). Other costs may include purchase of resource materials, instructional materials, and/or the services of content experts to lead professional development related to the improvement goal(s).

Student Populations

The OTE process has been used by urban, suburban, and rural schools; Title I schools; and schools with large numbers of bilingual students.

Special Considerations

It is critical that schools identify and contract with experts who can provide training in the school improvement goal(s) area above and beyond the research synthesis materials and other resources provided by OTE trainers.

Selected Evaluations

Developer

Blum, R. E., Yap, K. O., & Butler, J. A. (1991). *Onward to Excellence impact study*. Portland, OR: Northwest Regional Educational Laboratory.

Kushman, J. W., & Yap, K. (1997). *Mississippi Onward to Excellence impact study: Final report*. Portland, OR: Northwest Regional Educational Laboratory.

Landis, S. (1997b). *Snoqualmie Valley: There's a real buzz on around here about education*. Portland, OR: Northwest Regional Educational Laboratory.

Outside Researchers

None available.

Sample Sites

Bruce High School
P.O. Box 248
Bruce, MS 38915
601-983-3350
Contact: Lee Mize

Fall City Elementary School
33314 S.E. 42nd Place, Box 220
Fall City, WA 98024
425-222-5265
Contact: Don McConkey

For more information, contact:

Bob Blum
Northwest Regional Educational Laboratory
School Improvement Program
101 SW Main Street, Suite 500
Portland, Oregon 97204
Phone: 503-275-9615
Fax: 503-275-9621
E-mail: blumb@nwrel.org
Web site: http://www.nwrel.org/scpd/ote

Paideia (K-12)

IN BRIEF Paideia	
Developer	Mortimer Adler
Year Established	1984
# Schools Served (Jan. 1998)	80+
Level	K-12
Primary Goal	preparing each student for earning a living, being a citizen of this country and the world, and pursuing life-long learning
Main Features	• Socratic seminars • didactic instruction • one-on-one coaching
Results	increased writing and other scores for students in selected Paideia schools; reports from teachers of improved critical thinking skills among Paideia students
Impact on Instruction	Socratic seminars require the greatest shift in instructional technique
Impact on Organization/ Staffing	half- or full-time facilitator
Impact on Schedule	requires flexible scheduling to accommodate Socratic seminars
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parents are encouraged to be involved in classes
Technology	used to aid individual instruction
Materials	developed by National Center and individual schools

Origin/Scope

Mortimer Adler outlined the Paideia approach in his 1984 book *Paideia Proposal: An Educational Manifesto*. The National Paideia Center (NPC) supports the efforts of educators implementing the Paideia Program through networks, staff development, a newsletter and other publications. Housed at the University of North Carolina, Chapel Hill, the NPC partners with over 80 schools in 12 states.

General Description

Paideia's purpose is to prepare each student for earning a living, being a citizen of this country and the world, and pursuing life-long learning. Paideia educators believe that high academic achievement is expected of all students and that it is society's duty to provide that opportunity. A fundamental belief is that universal, high quality education is essential to democracy.

Instructional goals are based on acquisition of knowledge, development of intellectual skills, and enlarged understanding of ideas and values. These are addressed through three instructional approaches:

- *didactic instruction:* teacher lecturing which provides opportunities for "acquisition of knowledge";
- *coaching:* one-on-one instruction from the teacher, which takes place while students work independently at their own level and pace; and
- *small group seminars:* which usually use the Socratic method of questioning to explore issues in greater depth.

Schoolwide restructuring is necessary to fully implement all three instructional pieces, as Socratic seminars often require longer class periods (up to 2 hours), while coaching may call for smaller classes enabling teachers to spend more time with individuals. The National Paideia Center advocates schools' using locally developed standards. Schools are

supported to align program goals and instructional practices to achieve local standards for students.

Results

Evaluations of the Paideia model in several districts have included data on student achievement. For example, an evaluation comparing Paideia and non-Paideia students in two Chicago high schools found that Paideia students scored higher in reading comprehension, math problem-solving, science, and writing. From 1994 to 1996, the number of students from 12 Paideia schools in Guilford County (North Carolina) who passed the state's fourth-grade writing test increased by 27 percentage points, compared to a statewide increase of 17 percentage points. And at a middle school in North Carolina, writing test scores of eighth-grade students who had taken weekly Paideia seminars for three year showed a greater increase over that period than scores of eighth-graders statewide. Gains for minority students at the school were greater than gains for the class as a whole.

Seminar implementation also has been studied. The flexibility of the Paideia approach was perceived as both an "advantage and a hindrance" (Herman & Stringfield, p. 24) because teachers could depart from or alter the program, potentially diluting its effectiveness. Teachers in this same study reported that students improved in critical thinking and in their ability to express themselves clearly. Test scores at Paideia and non-Paideia schools in the study remained the same.

Further research is being planned. The Guilford County School Board recently commissioned a $250,000 study to be completed over four years (1997-2001) by the School of Education of the University of North Carolina at Greensboro.

Implementation

- ***Project Capacity:*** The National Paideia Center is focusing its efforts on schools where it can maximize its capacity to facilitate the growth of the Paideia Program. The NPC is looking to work with between 3 and 15 schools in one district or region for the 1998-99 school year, in addition to the existing Paideia schools.
- ***Faculty Buy-in:*** A yes vote by secret ballot of at least 80% of a school staff is one of the minimum requirements for implementation of the Paideia Program. (See Special Considerations for other requirements.)
- ***Initial Training:*** Representatives from the NPC provide 25-35 person days of on-site assistance for training and follow-up implementation visits. Usually four days of training are held prior to the beginning of the school year. Training efforts involve all teachers and administrators as well as parents from a school. Paideia facilitators provide on-site training in the Socratic method and support teachers in identifying and building resource materials.
- ***Follow-Up Coaching:*** NPC staff follow up the original training with monthly on-site technical support.
- ***Networking:*** A newsletter, use of e-mail, annual conferences, and the NPC Web site are main networking venues.
- ***Implementation Review:*** During implementation visits, NPC staff meet with the principal and facilitator, observing in classrooms and meeting with staff members. After each visit, a summary of observations, including next steps, is sent to the school.

Costs

Costs for the Paideia Program are determined based on the size and location of the individual school and the number of schools collaborating in the training. Full implementation of the Paideia Program takes three years and is broken down as follows:

- Year 1 (Paideia Seminar): $50-$70,000
- Year 2 (Intellectual Coaching): $40-$50,000
- Year 3 (Assessment): $30-$40,000

These figures are based on a school with 35 faculty members. Costs may vary, however, and are calculated specifically to each school. Paideia also requires one full-time Paideia facilitator.

Student Population

The Paideia Program has been successfully implemented in urban and rural schools serving all types of students.

Special Considerations

The NPC is trying to ensure that schools go through a buy-in and adoption process and be accepted by the National Paideia Center *before* they apply for federal funding. The minimum requirements for implementing the Paideia Program are:

- An introductory presentation by a NPC representative
- A yes vote of 80% of staff in support of implementation
- Start-up costs for training and materials of approximately $50-$70,000 depending on school size
- Designation of one teacher as a full-time Paideia facilitator
- Commitment to a peer-coaching program to support implementation

The approach is designed to avoid a situation in which schools are approved for funding without an informed commitment from the necessary staff needed for high-quality implementation.

Selected Evaluations

Developer

Moore, J. (1990). *Alternative programs, an evaluation report.* Cincinnati, OH: Planning, Research and Evaluation Branch of the Cincinnati Public Schools.

Outside Researchers

Herman, R., & Stringfield, S. (1997). *Ten promising programs for educating all children: Evidence of impact.* Arlington, VA: Educational Research Service.

Wallace, T. (1993). Chicago public schools: Evaluation of the 1987-88 Paideia program. In D. R. Waldrip, W. L. Marks, and N. Estes (Eds.), *Magnet school policy studies and evaluations* (p. 477-515). Houston: International Research Institute on Educational Choice.

Wheelock, A. (1994). Chattanooga's Paideia schools: A single track for all — and it's working. *Journal of Negro Education, 63*(1), 77-92.

Sample Sites

Madison Elementary School
3600 Hines Chapel Road
McLeansville, NC 27301
910-375-2555
Principal: Denise Byrd

Paideia Academy at
Oakhurst (K-6)
4511 Monroe Road
Charlotte, NC 28205
704-343-6482
Paideia Coordinator: Meryle Elko

Pueblo School for the Arts
and Sciences (K-11)
745 Acero
Pueblo, CO 81004
719-549-2737
Principal: Sam Pantleo

For more information, contact:

Terry Roberts
National Paideia Center
School of Education CB #8045
University of North Carolina
Chapel Hill, NC 27599-8045
Phone: 919-962-7379
Fax: 919-962-7381
E-mail: npc@.unc.edu
Web site: http://www.unc.edu/paideia/

Roots &Wings (PreK-6)

IN BRIEF Roots & Wings	
Developer	Robert Slavin, Nancy Madden, and a team of developers from Johns Hopkins University
Year Established	1993
# Schools Served (Jan. 1998)	747 schools use Success for All; over 200 of these have added Roots & Wings components
Level	preK-6
Primary Goal	to guarantee that every child will progress successfully through elementary school
Main Features	• research-based curricula • one-to-one tutoring • family support team • cooperative learning • on-site facilitator • building advisory team
Results	students in Roots & Wings schools have outperformed students in control schools
Impact on Instruction	combination of prescribed curriculum with teacher-developed instruction in the areas of literacy, math, and social and scientific problem-solving
Impact on Organization/ Staffing	family support team; full-time facilitator; building advisory committee; one-to-one tutoring
Impact on Schedule	schedule may need to be adjusted to incorporate curricular requirements
Subject-Area Programs Provided by Developer	yes (reading, math, science, social studies)
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	family support team works to increase strong school-home connections
Technology	none required
Materials	provided (as part of the cost of design)

Origin/Scope

Roots & Wings, created in 1993 by Robert Slavin, Nancy Madden, and a team of developers at Johns Hopkins University, is a comprehensive, whole-school reform model designed to place a high floor under the basic skills achievement of all students while building problem solving skills, creativity, and critical thinking. As of January 1998, Success for All, the reading component of Roots & Wings, is operating in 747 schools in 40 states. Over 200 of these schools have added the math, science, and social studies components that constitute Roots & Wings.

General Description

The purpose of Roots & Wings is to create well-structured curricular and instructional approaches for all elementary subjects, prekindergarten to grade 6, based on well-evaluated components and well-researched principles of instruction, assessment, classroom management, motivation, and professional development.

Roots & Wings builds on the Success for All program, initiated in 1987, which provides research-based curricula for students in prekindergarten through grade six in reading, writing, and language arts; one-to-one tutoring for primary grade students struggling in reading; and extensive family support services (see description of Success for All, pp. 103-106). To these, Roots & Wings adds MathWings, a practical, constructivist approach to mathematics for grades 1-5, and WorldLab, an integrated approach to social studies and science emphasizing simulations and group investigations for grades 1-5.

Roots refers to strategies that every child needs in order to meet world-class standards and have good language skills, reading skills, and health. It involves early intervention for at-risk children, research-based curricula with extensive training support, one-to-one tutoring, integrated health and social services, and family support. *Wings* refers to a curriculum and instruction strategy designed to let children soar. Each school has a full-time facilitator to help implement the program, a Family Support Team to foster community and parent involvement, and a Building Advisory Team to evaluate the entire school climate and advise the principal on general direction and goals.

Results

Research on Roots & Wings has found substantial positive effects of the program in all curricular areas. For example, on the Maryland School Performance Assessment Program (MSPAP), students in four high-poverty pilot schools in rural St. Mary's County gained significantly more than other Maryland students in reading, writing, language, social studies, and science. These schools, in which 48% of students qualified for free lunch, began far below state averages, but by 1996 were scoring at or above state averages in all subjects at grades 3 and 5. A number of other Roots & Wings schools across the country have achieved similar gains on state tests.

Research has established the effectiveness of Success for All, the reading, writing, and language arts components of Roots & Wings. See the description of Success for All (pp. 103-106) for a discussion of this research.

Implementation

- ***Project Capacity:*** National center at John Hopkins University. For the 1998-99 school year, Roots & Wings/Success for All will accept 400 new schools. Seventy-five current Success for All schools will add MathWings or WorldLab.
- ***Faculty Buy-In:*** A school entering the program must have 80% or more of its staff in support of adoption.
- ***Initial Training:*** For each component, all teachers receive detailed manuals supplemented by three days of training at the beginning of the school year provided by Roots & Wings trainers.
- ***Follow-up Coaching:*** Throughout the year, follow-up visits are made to the school by project trainers who visit classrooms, meet with school staff, and conduct presentations. The staff development model used in Roots & Wings emphasizes relatively brief initial training with extensive classroom follow-up, coaching, and group discussion. The building facilitator also organizes informal sessions to allow teachers to share problems, suggest changes, and discuss individual children.
- ***Networking:*** Conferences are held annually for principals and facilitators to network with those from other schools, receive program updates, and share problem-solving strategies. In many parts of the country, schools are joining forces with each other to create local support networks, and in some cases experienced schools are becoming mentors for new schools just starting out in the program. Roots & Wings produces an annual newsletter sent to all schools, and a Web site contains general program information and research articles.

- ***Implementation Review:*** Follow-up is done with schools implementing the design through the on-site facilitators.

Costs

Roots & Wings is typically funded by reallocating existing Title I, state compensatory, and special education funds in high poverty schools. The program facilitator and tutors required by the program generally come from existing school personnel, such as Title I-funded teachers. During the first year, schools typically implement the Success for All reading program, which averages about $70,000 for a school of 500 students (see the description of Success for All, pp. 103-106, for details). The second year, schools generally add either MathWings or WorldLab, with costs dropping slightly. The third year, they implement the remaining component, and costs drop slightly again. Costs are lower for districts near locations of Roots & Wings trainers, for districts implementing the design in multiple schools, for schools implementing only a portion of the design, and for smaller schools.

Student Populations

Roots & Wings primarily works with schools located in areas serving disadvantaged students and therefore is particularly appropriate for schools with large Title I and other federal programs (e.g., Bilingual Education, Special Education). Roots & Wings has been implemented successfully in schools with tremendously diverse student populations. The model is being used in inner-city schools in several large cities across the country, as well as a broad range of rural schools.

Special Considerations

Because demand for Roots & Wings/Success for All is expected to exceed capacity in 1998, the project will set priorities to work with districts it is working with now, with districts near training centers, and with districts or regions willing to bring on clusters of schools (4+). Any school interested in adopting Roots & Wings/Success for All should begin the awareness and application process immediately.

Selected Evaluations

Developer

Slavin, R. E., Madden, N. A., & Wasik, B. A. (1997). *Success for All and Roots and Wings: Summary of research on achievement outcomes.* Baltimore: Johns Hopkins University, Center for Research on the Education of Students Placed at Risk.

Working towards excellence: Results from schools implementing New American Schools designs. (1997). Arlington, VA: New American Schools.

(See the Success for All description, pp. 103-106, for additional research on that component of the design.)

Outside Researchers

Bodilly, S., with Purnell, S., Ramsey, K., & Keith, S. J. (1996). *Lessons from New American Schools Development Corporation's demonstration phase.* Santa Monica, CA: RAND.

Sample Sites

Demonstration sites are available in many parts of the U.S. Contact the Roots & Wings program for the nearest sites.

For more information contact:

Roots & Wings
Johns Hopkins University
3505 North Charles Street
Baltimore, MD 21218
Phone: 1-800-548-4998
Fax: 410-516-0543
E-mail: info@successforall.com
Web site: http://www.successforall.com

School Development Program (K-12)

IN BRIEF School Development Program	
Developer	James Comer, Yale University
Year Established	1968
# Schools Served (Jan. 1998)	721
Level	primarily K-6, but also some middle and high schools
Primary Goal	mobilize entire community of adult caretakers to support students' holistic development to bring about academic success
Main Features	• three teams (school planning and management team, student and staff support team, parent team) • three operations (comprehensive school plan, staff development plan, monitoring and assessment) • three guiding principles (no-fault, consensus, collaboration)
Results	student achievement in many Comer schools has risen significantly, often outpacing districtwide achievement or achievement in control schools
Impact on Instruction	goals and outcomes are developed through the comprehensive school plan process
Impact on Organization/ Staffing	representative teams provide input into decision-making process; decisions made through collaboration and consensus
Impact on Schedule	depends on decisions of teams
Subject-Area Programs Provided by Developer	generally not, although a literacy program has been developed and piloted
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parent team; parents serve on school planning and management team; in general, parental involvement is central to the program
Technology	depends on decisions of teams
Materials	training manual with materials; 14-segment video series

Origin/Scope

The School Development Program, founded by child psychiatrist James Comer of Yale University, was first implemented in 1968 in the two lowest achieving schools in New Haven, Connecticut. Today 541 elementary schools, 107 middle schools, and 73 high schools are using the program, also known as the Comer Process.

General Description

Many children in inner city schools, Comer believes, come to school without the personal, social, and moral development necessary for academic success. To compound this problem, many school staff members, lacking adequate knowledge of child development and the children's home culture, are unprepared to deal appropriately with these students and their families.

Over a period of years, Comer developed a nine-part process to improve educators' understanding of child development and to foster healthier relations between school and home. Three mechanisms, three operations, and three principles guide the process:

Mechanisms

- School Planning and Management Team: develops and monitors a Comprehensive School Plan; includes administrators, teachers, support staff, parents, and others.
- Student and Staff Support Team: helps improve the social climate of the school; includes social workers, counselors, special education teachers, and other staff with child development and mental health backgrounds.
- Parent Team: promotes parent involvement in all areas of school life.

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Operations

- Comprehensive School Plan: gives direction to the school improvement process; covers academics, school climate, staff development, public relations, and other areas.
- Staff Development Plan: focuses teacher training on needs related to the goals and priorities specified in the comprehensive plan.
- Monitoring and Assessment: generates data on implementation and results; allows teams to modify the school's approach where necessary.

Guiding Principles

- No-Fault Approach to Problem-Solving: lets teams analyze and solve problems without recrimination.
- Consensus Decision Making: promotes dialogue and common understanding.
- Collaboration: enables both the principal and the teams to have a say in the management of the school.

Results

School Development Program researchers have conducted numerous studies of student achievement in Comer schools over the past 15 years. Some studies have compared student achievement in Comer schools to that in control schools. A 1985 study, for example, found that fourth and fifth grade students in Comer schools received significantly higher reading and math grades than students in control schools, and that third and fourth grade students in Comer schools scored significantly higher on CAT reading tests.

Other studies have compared student achievement in Comer schools to that for the district as a whole. In Prince George's County, Maryland, for example, average percentile gains on math, reading, and language arts CAT scores for the district's 10 Comer schools were significantly higher than the average percentile gains for district schools as a whole. Comer schools in Benton Harbor, Michigan, also witnessed considerable improvements in CAT scores over a four-year period, though district scores in some subjects in some grades improved as much as or more than scores in Comer schools. Several studies have found that student achievement improves more at schools that faithfully implement the Comer Process than at low implementation schools.

Finally, a number of studies have documented improvements in behavior, attendance, self-concept, and school climate in Comer schools.

Implementation

- ***Project Capacity:*** National Center at Yale University; Regional Professional Development Centers in Cleveland, San Francisco, and Prince George's County (Maryland); partnerships with universities and urban school districts in Cleveland, San Francisco, and New Orleans.
- ***Faculty Buy-In:*** No formal vote is required at schools. However, both the school and the district must make specific commitments to the program after an extensive "entry process" of discussion and examination. Additionally, the program now accepts new members only in districts that either already have or promise to have a sizable number of Comer schools.

- ***Initial Training:*** From each district, a designated district facilitator and principals from participating schools (and sometimes selected teachers and parents) attend a week-long workshop at Yale in May prior to the first year of implementation. The following February, they return for another week-long session. Yale also holds a Principals' Academy at the end of the first year of implementation.
- ***Follow-Up Coaching:*** Facilitators and principals are responsible for training school staffs. They may be assisted upon request by members of the national or regional staffs.
- ***Networking:*** The School Development Program publishes a quarterly newsletter and supports a Web site. The program has also experimented with a variety of teleconferencing strategies, including satellite broadcasts and desktop video-conferencing.
- ***Implementation Review:*** School Development Program staff members visit member schools twice per year to assess the quality of implementation. Schools also complete a variety of checklists and questionnaires each year to document progress.

Costs

The School Development Program charges a flat fee of $15,000 per participating district. That fee entitles the district to send five people to both of the week-long workshops at Yale. It also covers two on-site visits by a program staff member. For $1,000 per slot, a district can send as many additional people to the Yale workshops as it wishes. Schools also must cover release time and travel expenses for the trips to Yale and for the on-site visits. Additionally, the program recommends that the district budget for a full-time program facilitator, although some districts have gotten by with half-time facilitators. Depending on their resources and priorities, individual schools may need to hire additional staff or pay for additional professional development for teachers.

Student Populations

The School Development Program was designed to meet the needs of inner city schools and students. Over the years, however, it has been implemented in a range of schools, including some suburban and rural schools.

Special Considerations

The School Development Program focuses on building positive and productive relationships. Therefore its success depends on a substantial degree of collegiality and cooperation among teachers, principals, parents, and students. Until recently, program staff have assumed that decisions about curriculum and instruction would be made by teachers and others through participation on teams. Recently, the program has established a new unit to help schools more directly address curriculum alignment, literacy skills, and other curricular and instructional areas.

Selected Evaluations

Developer

Comer, J. P. (1988, November). Educating poor minority children. *Scientific American*, pp. 42-48.

Comer, J. P., Haynes, N. M., Hamilton-Lee, M., Boger, J. M., & Rollock, D. (1985). *Psychosocial and academic effects of an intervention program among minority school children*. New Haven, CT: Yale University Child Study Center.

Comer, J. P., Haynes, N. M., Hamilton-Lee, M., Boger, J. M., & Rollock, D. (1986). *Academic and affective gains from the School Development Program: A model for school improvement*. Paper presented at the annual meeting of the American Psychological Association, Washington, DC, August.

Haynes, N. M., & Emmons, C. L. (1997). *Comer School Development Program effects: A ten-year review, 1986-1996*. New Haven, CT: Yale University Child Study Center.

Outside Researchers

Noblit, G., Malloy, C., Malloy, W., Villenas, S., Groves, P., Jennings, M., Patterson, J., & Rayle, J. (1997). *Scaling up a supportive environment: Case studies of successful Comer schools*. Chapel Hill, NC: University of North Carolina.

Stringfield, S., Millsap, M. A., Herman, R., Yoder, N., Brigham, N., Nesselfodt, P., Schaffer, E., Karweit, N., Levin, M., & Stevens, R. (1997). *Urban and suburban/rural special strategies for educating disadvantaged children: Final report*. Washington, DC: U.S. Department of Education.

Wong, P. L., Oberman, I., Mintrop, H., & Gamson, D. (1996). *Evaluation of the San Francisco Bay Area school reform portfolio: Summary report*. Stanford, CA: Stanford University.

Sample Sites

Cleveland Public Schools
1380 E. 6th Street, Room 359
Cleveland, OH 44114
216-574-8505
Assistant Superintendent: Joy Smith

Guilford County Schools
120 Franklin Boulevard
P.O Box 880
Greensboro, NC 27401
910-370-2305
Associate Superintendent: Lillie Jones

Prince George's County Public Schools
Belair Staff Development Center
3021 Belair Drive
Bowie, MD 20715
301-805-2743
Comer/Milliken Director: Jan Stocklinski

For more information, contact:

Joanne Corbin
School Development Program
55 College Street
New Haven, CT 06510
Phone: 203-737-4016
Fax: 203-737-4001
E-mail: joanne.corbin@yale.edu
Web site: http://info.med.yale.edu/comer

Success for All (PreK-6)

IN BRIEF Success for All	
Developer	Robert Slavin, Nancy Madden, and a team of developers from Johns Hopkins University
Year Established	1987
# Schools Served (Jan. 1998)	747
Level	preK-6
Primary Goal	ensuring that all children learn to read
Main Features	• schoolwide reading curriculum • cooperative learning • grouping by reading level (reviewed by assessment every 8 weeks) • tutoring for students in need of extra assistance • family support team
Results	consistently, students in Success for All schools have outperformed students in control schools on reading tests; effects have been even more pronounced for students in the bottom quartile
Impact on Instruction	in reading classes — prescribed curriculum, cooperative learning; other subjects not affected (see Roots & Wings for a description of other curricular components that can be added)
Impact on Organization/ Staffing	building advisory committee; full-time facilitator; family support team; tutors
Impact on Schedule	daily 90-minute reading periods; tutoring
Subject-Area Programs Provided by Developer	yes (reading)
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	family support team works to increase parental involvement
Technology	none required
Materials	detailed materials provided

Origin/Scope

Success for All was founded by Robert Slavin, Nancy Madden, and a team of developers from Johns Hopkins University. It was first implemented in a single elementary school in Baltimore in 1987. The following year it expanded to six schools (five in Baltimore and one in Philadelphia). By January 1998, it had grown to 747 schools in 40 states.

General Description

Success for All restructures elementary schools (usually high poverty Title I schools) to ensure that every child learns to read in the early grades. The idea is to prevent reading problems from appearing in the first place and to intervene swiftly and intensively if problems do appear.

Success for All prescribes specific curricula and instructional strategies for teaching reading, including shared story reading, listening comprehension, vocabulary building, sound blending exercises, and writing activities. Teachers are provided with detailed materials for use in the classroom. Students often work cooperatively, reading to each other and discussing story content and structure. From second through sixth grade, students use basals or novels (but not workbooks). All students are required to spend 20 minutes at home each evening reading books of their choice.

Students are grouped according to reading level for one 90-minute reading period per day. The rest of the day they are assigned to regular age-grouped grades. Every eight weeks, teachers assess student progress using formal measures of reading comprehension as well as observation and judgment. The assessments determine changes in the composition of the reading groups and help identify students in need of extra assistance. Those students receive

one-on-one tutoring for 20 minutes per day at times other than regular reading or math periods. First graders get priority for tutoring. Tutors are generally certified teachers, though well-qualified paraprofessionals may tutor children with less severe reading problems.

Because parental involvement is considered essential to student success, each Success for All school forms a Family Support Team, which encourages parents to read to their children, involves parents in school activities, and intervenes when problems at home interfere with a child's progress in school. The operation of Success for All is coordinated at each school by a full-time facilitator who helps plan the program and coach teachers. Finally, an advisory committee composed of the principal, facilitator, teacher and parent representatives, and family support staff meets regularly to review the progress of the program.

Results

From the beginning there has been a strong focus in Success for All on research and evaluation. Numerous studies have compared scores on standardized reading tests (specifically, the Durrell Oral Reading Scale and several scales from the Woodcock Reading Mastery Test) for students in Success for All schools and control schools. Results indicate that Success for All significantly improves reading performance, especially for students in the lowest 25% of their class. Compared to control groups, Success for All students score about three months higher in the first grade and 1.1 years higher in fifth grade on reading measures. A school's reading performance tends to increase with each successive year of program implementation. Evaluations also indicate positive impacts on the achievement of limited-English proficient students and students who have been assigned to special education. Retentions and special education placements decline significantly in Success for All schools.

Implementation

- ***Project Capacity:*** National center at Johns Hopkins; regional centers at the University of Memphis (Tennessee), WestEd (a regional laboratory in San Francisco serving California and Nevada), and Education Partners (a for-profit organization in San Francisco serving Colorado, Idaho, New Mexico, Oregon, and Washington); regional trainers in seven other states. In 1998-99 Success for All expects to add about 400 schools nationally.
- ***Faculty Buy-In:*** 80% of a school's professional staff must vote on a secret ballot to adopt the program.
- ***Initial Training:*** In April prior to implementation, the school's principal and facilitator attend a week-long training session at Johns Hopkins. In August, project staff members visit the school for three days of intensive training for the full school staff.
- ***Follow-Up Coaching:*** Over the first year of implementation, trainers conduct numerous follow-up visits to introduce new components of the program to teachers and to work with the facilitator, who, over time, assumes most of the coaching and problem-solving responsibilities.
- ***Networking:*** Success for All supports a Web site, publishes a newsletter, and hosts an annual national conference.
- ***Implementation Review:*** Two trainers make three two-day visits to a school during its first year. The trainers interview staff, observe classes, examine data, and write a

summary of their findings. They also use these opportunities to coach staff and consult with the facilitator.

Costs

Success for All is typically funded by reallocating existing Title I, state compensatory, and special education funds in high poverty schools. The full-time facilitator and tutors required by the program generally come from existing school personnel, such as Title I-funded teachers. Costs for materials and training vary according to school size and other factors, but average about $70,000 during the first year, $28,000 the second, and $21,000 the third (estimated cost for a school of 500 students; add or subtract $65 per pupil over or under 500). Costs are lower for districts near locations of Success for All trainers and for districts implementing the design in multiple schools. Success for All staff work with schools and districts on how to use Title I, other compensatory education, special education, and state, local, and foundation sources to implement the design.

Student Populations

Success for All was developed primarily for inner city elementary schools serving large numbers of disadvantaged children. However, the design has also been implemented in many rural and suburban districts. Additionally, a Spanish version of Success for All's beginning reading program, *Lee Conmigo,* has been developed, and materials are available to support bilingual and ESL instruction through the sixth grade.

Special Considerations

Reading teachers must be willing to use detailed Success for All materials. Because the developers expect demand to exceed capacity, they have set priorities to work with districts that already have Success for All schools, with districts near training centers, and with districts or regions willing to bring on clusters of schools (more than four). Applications for a given school year must be filed before April 1 of the preceding school year.

Selected Evaluations

Developer

Madden, N. A., Slavin, R. E., Karweit, N. L., Dolan, L. J., & Wasik, B. A. (1993). Success for All: Longitudinal effects of a restructuring program for inner-city elementary schools. *American Educational Research Journal, 30,* 123-148.

Slavin, R. E., Madden, N. A., Dolan, L. J., & Wasik, B. A. (1993). *Success for All: Evaluations of national replications* (Report No. 43). Baltimore: Johns Hopkins University, Center for Research on Effective Schooling for Disadvantaged Students.

Slavin, R. E., Madden, N. A., & Wasik, B. A. (1996). *Success for All / Roots and Wings: Summary of research on achievement outcomes.* Baltimore: Johns Hopkins University, Center for Research on the Education of Students Placed at Risk.

Outside Researchers

Dianda, M. R., & Flaherty, J. F. (1995). *Report on workstation uses: Effects of Success for All on the reading achievement of first graders in California bilingual programs.* Los Alamitos, CA: Southwest Regional Laboratory.

Ross, S. M., & Smith, L. J. (1994). Effects of the Success for All model on kindergarten through second-grade reading achievement, teachers' adjustment, and classroom-school climate at an inner-city school. *Elementary School Journal, 95,* 121-138.

Stringfield, S., Millsap, M. A., Herman, R., Yoder, N., Brigham, N., Nesselfodt, P., Schaffer, E., Karweit, N., Levin, M., & Stevens, R. (1997). *Urban and suburban/rural special strategies for educating disadvantaged children: Final report.* Washington, DC: U.S. Department of Education.

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Sample Sites

El Vista Elementary School
450 El Vista Avenue
Modesto, California 95355
209-575-4665
Principal: Jennifer Schindler

Lackland City Elementary
101 Dumont
San Antonio, TX 78236
210-678-2946
Principal: Jerry Allen

P.S. 159
2781 Pitkin Avenue
Brooklyn, NY
718-277-4828
Principal: Kathy Garibaldi

Demonstration sites are available in many areas of the U.S. Contact the Success for All program for the nearest sites.

For more information, contact:

Success for All
Johns Hopkins University
3505 North Charles Street
Baltimore, MD 21218
Phone: 1-800-548-4998
Fax: 410-516-0543
E-mail: info@successforall.com
Web site: http://successforall.com

Talent Development High School With Career Academies (9-12)

IN BRIEF Talent Development High School	
Developer	Center for Research on the Education of Students Placed At Risk, Johns Hopkins University and Howard University
Year Established	1995
# Schools Served (Jan. 1998)	7
Level	9-12
Primary Goal	improve achievement and other outcomes for at-risk students in large high schools
Main Features	• ninth-grade success academy • career academies for grades 10-12 • core curriculum in a 4-day period • twilight school
Results	increased math and writing scores, attendance, and promotion rates at the initial TDHS high school
Impact on Instruction	high level core curriculum prepares all students for college attendance; four-period day allows in-depth instruction and project learning
Impact on Organization/ Staffing	ninth-grade success academy and career academies are distinct small schools with their own faculty and management
Impact on Schedule	four-period day
Subject-Area Programs Provided by Developer	no
Students Served	
Title I	yes
English-language learners	not a focus at high school level
Urban	yes
Rural	to be determined
Parental Involvement	incorporates the Epstein six-fold parent/school partnership approach
Technology	integrated into curricular areas
Materials	supporting materials provided

Origin/Scope

At the invitation of the Maryland State Department of Education, Patterson High School in Baltimore — one of two high schools eligible for state takeover — and the Center for Students Placed At Risk at Johns Hopkins University worked together to develop reforms to turn the school around. The first-phase Talent Development Model with Career Academies (TDHS) was implemented in 1995-96. Currently, six other schools in five urban districts across the nation are implementing the model.

General Description

The Talent Development High School with Career Academies is a comprehensive multi-phased reform model for large high schools that have serious problems with student attendance, discipline, achievement scores and dropout rates. Among its components:

- *Ninth Grade Success Academy:* A separate transitional program places groups of 150-180 first-year students with interdisciplinary teams of 4-5 teachers who share a block schedule with common planning time. This program has its own faculty, its own management team, and its own part of the building with a clearly labeled entrance.
- *Career Academies for the Upper Grades:* Several self-contained Career Academies are formed in the upper grades, each enrolling 250-350 students. Each academy offers the same common core of academic courses with an appropriate blend of career applications to match the particular academy theme, so college entrance as well as

entry to work is possible from each academy. Like the ninth grade academy, each career academy has its own faculty, management team, section of the building, and entrance. Depending on their size, schools can have from two to six academies.

- *Core Curriculum in a Four-Period Day:* A basic set of academic courses is required for all students. The ninth grade curriculum features double time in mathematics and English for students who have weak prior preparations. Summer school, Saturday school, and after-hours credit school are offered so students can recover from course failures.
- *Twilight School:* An alternative after-hours program is conducted in the building for students who have serious attendance or discipline problems or who are coming to the school from prison or suspension from another school. Instruction is offered in small classes in the basic subjects, and extensive services are provided by guidance and support staff.

Results

Implementation and results have been evaluated at Patterson High School (the first TDHS school). In 1996-97 (the second year of implementation), the portion of students passing the mathematics portion of the State Functional Exams increased by 20 percentage points (36% to 56%) over the previous year's scores. The increase in writing scores was 12 percentage points (45% to 57%). These scores gave Patterson the highest pass rate in mathematics and the third highest pass rate in writing among Baltimore's nine neighborhood high schools. Reading scores dropped slightly, from 87% to 85%.

Additionally, Patterson witnessed significant improvements in student attendance and promotion rates. Patterson made its greatest strides in increasing the numbers of ninth-graders who earned promotion to the tenth grade.

After implementation, teacher concerns about tardiness, absenteeism, fights, vandalism, student apathy, drug use, and abuse of teachers all decreased dramatically at Patterson but not at a comparison school. Most teachers and students believed their school climate was better.

Implementation

- **Project Capacity:** Implementation teams are available from Johns Hopkins and Howard Universities. Several regional laboratories (WestEd, NCREL, SERVE) have taken initial steps to provide implementation assistance in their regions.
- **Faculty Buy-In:** After initial awareness activities, a school faculty undertakes an Application Process during which they commit to the program (an 80% vote is required) and engage in initial planning to outline its local TDHS design.
- **Initial Training:** School administrators and faculty plan and attend a two-day retreat in which program staff provide technical assistance in school organization. A program facilitator is assigned to the school.
- **Follow-Up Coaching:** Over the first and second years, the program facilitator and other program staff provide on-going coaching and technical assistance in the development of the school organization components and the math, science, and language arts curriculum components.

- **Networking:** Urban districts form a local network of TDHS schools. The network begins with implementation in one or two schools, then adds schools as the use of the program expands. Additionally, a Web site and a national network coordinated by Hopkins/Howard are being established.
- **Implementation Review:** Through the first two years, implementation is reviewed during coaching sessions. Schools also complete survey forms annually to report on implementation and program effects.

Costs

Planning year and implementation year costs will vary widely due to school configurations and availability of staff development and planning time. Redesign of entrances and space for the Academies must be covered, as well as career interest inventories for students and time for teachers to plan Academies and attend workshops. Additional management team leaders for each Academy may need to be added to staff if redistribution of Vice Principals and Department Chairs is insufficient. Technical assistance materials and support can be provided by district sources but may also involve added costs. A general estimate can be made of 1-2% of total school budget as additional annual costs to plan and implement the management and school organization phases of the Talent Development Model.

The costs of the second phases involving redesigned curriculum and instruction will depend upon a school's current availability of technology and annual budget for new books, instructional materials, and staff development, but is likely to be on the order of 3-5% of the total budget in additional costs.

Student Populations

The program is designed to serve student populations in large, usually urban, high schools in which attendance, discipline, safety, high dropout, and low student achievement are issues.

Special Considerations

None.

Evaluations

Developer

McPartland, J. M., Legters, N., Jordan, W., & McDill, E. L. (1996). *The Talent Development High School: Early evidence of impact on school climate, attendance, and student development* (Report No. 2). Baltimore: Johns Hopkins University Center for Research on the Education of Students Placed At Risk.

Legters, N., Jordan, W., & McPartland, J. M. (1997). Effects on teachers and students after two years in a Talent Development High School. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Outside Researchers

None available.

Sample Site

Patterson High School
100 Kane Street
Baltimore, MD 21224
410-396-9276
Principal: Kevin Harahan

For more information, contact:

James M. McPartland, Co-director
Talent Development High School Program
Center for Students Placed At Risk
Johns Hopkins University
3003 North Charles Street, Suite 200
Baltimore, MD 21218
Phone: 410-516-8800
Fax: 410-516-8890
E-mail: jmcpartlan@csos.jhu.edu

Urban Learning Centers (preK-12)

IN BRIEF Urban Learning Centers	
Developer	Los Angeles Unified School District; United Teachers Los Angeles; Los Angeles Educational Partnership
Year Established	1992
# Schools Served (Jan. 1998)	19
Level	preK-12
Primary Goal	to create learning environments where high-quality instruction is supported by a well organized school that is strongly connected to its community
Main Features	• thematic, interdisciplinary curriculum • transitions from school to work and postsecondary education • integrated health and human services on school site • collaborative governance model
Results	98% of seniors from the first graduating class at the two model learning centers were accepted to postsecondary institutions
Impact on Instruction	program works with staff to develop curriculum and instruction approaches
Impact on Organization/ Staffing	professional development (5-10 days); structural changes (e.g., heterogeneously grouped classrooms, team teaching); shared decision-making with school community
Impact on Schedule	schools likely to be open for longer hours and throughout summer
Subject-Area Programs Provided by Developer	provides content training in math, science, and literacy
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	no
Parental Involvement	parental involvement in governance; school/home partnerships; adult programs on K-12 campus
Technology	technology supports all elements of the design; cost varies
Materials	provided as part of design fee

Origin/Scope

The Urban Learning Centers design (originally called Los Angeles Learning Centers) emerged in 1992 when it was chosen as one of the New American Schools Design Teams. It was a joint effort of the Los Angeles Unified School District, the United Teachers Los Angeles, and the Los Angeles Educational Partnership. Initially the design was implemented in two schools in Los Angeles. As of January 1998 it was operating in 19 schools in California.

General Description

The Urban Learning Centers is a comprehensive design for urban schools that calls for their reinvention into preK-12 "articulated communities," or systems for collaboration between all grade levels and schools (if K-12 is not contained on one campus). The design grows out of the work of experienced teachers and other educators, parents, community members, curriculum developers, technology specialists, and managerial consultants.

Each learning center comprises three essential components:

- ***Teaching and Learning:*** encompasses the content, structures, and processes of curriculum and teaching, including the integration of standards, a thematic, interdisciplinary curriculum, transitions from school to work and to postsecondary education, and project-based experiential learning opportunities;
- ***Learning Supports:*** develops a sense of community within and without schools, integrating health and human services at the school site; and

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- ***Governance and Management:*** advances empowerment of and collaboration among all learning community members: students, parents, teachers, administrators, staff, and community members.

The Urban Learning Centers uses technology to support all elements of the design. Within the instructional program, students and staff use technology as a tool to obtain, construct, and communicate knowledge. Administrative uses include communications, programmatic budgeting, and assessing achievement trends. In addition, technology assists the learning supports component with locating, referring, and then tracking the outcomes of students needing social services.

Each model school possesses a Learning Support system on campus that includes a family center, complete health clinic, parent volunteer program and an array of parent education classes.

Results

Ninety-eight percent of the first graduating class at the two model Urban Learning Centers were accepted to post-secondary institutions. These results support research that smaller high schools improve student outcomes, even in troubled urban areas. In addition, the Urban Learning Centers staff work with each participating school annually to analyze progress in student achievement and implementation.

Implementation

- ***Project Capacity:*** National center based at the Los Angeles Educational Partnership.
- ***Faculty Buy-In:*** Urban Learning Centers require enthusiastic support of school leadership, consensus of the school community, a signed memo of understanding, and the allocation of 1.5 FTE (full time equivalent) for staff to coordinate implementation.
- ***Initial Training:*** Extensive on and off-site professional development in the first year of implementation (training by program staff on design implementation and networking with other schools) for all staff members and selected parents.
- ***Follow-Up Coaching:*** Continued on and off-site professional development on implementing the design, goal setting, reviewing lessons learned, and collaborating with other schools.
- ***Networking:*** 1-800 hotline and e-mail for technical support; resource library of materials on best practices and standards that match Urban Learning Centers design; Web site for supporting information.
- ***Implementation Review:*** Urban Learning Centers staff works with each participating school annually to analyze progress in student achievement and implementation.

Costs

Direct fees for the Urban Learning Centers design range from $27,000 to $99,000 depending on the number of teachers and the school level (elementary or secondary). These fees include the costs of training, expenses, and materials. Other expenses that a school may incur include release time for staff for professional development and technology purchases, depending on a school site's current capacity. Urban Learning Centers will assist schools in identifying ways to re-allocate current funds or procure additional funding to cover these

costs, for example, using Title I school-wide program funds, grant money, and community partnerships.

Student Populations

The design is a comprehensive preK-12 model for urban schools. In Los Angeles, urban schools have a diverse ethnic population and many students speak English as a second language. More than 60% of the families at these school are at or below the federal poverty level and transience rates are also very high.

Special Considerations

Urban Learning Centers is a preK-12 design that works well with two to five elementary and secondary schools located in the same neighborhood and sharing the same student population. An ideal combination is three elementary schools, one middle school, and one high school. However, the design is also well suited to other combinations which cross over between the elementary and secondary levels.

Selected Evaluations

Developer
None available.

Outside Researchers
Aschbacher, P., & Rector, J. (1996). *Los Angeles Learning Centers evaluation report: July 1994 to June 1995*. Los Angeles, CA: Center for the Study of Evaluation.

Sample Sites

Corona Avenue Learning Center
3825 Bell Avenue
Bell, CA 90201
213-560-1323
Principal: Zena Schaffer

Elizabeth Learning Center
811 Elizabeth Street
Cudahy, CA 90201
213-562-0175
Principal: Emilio Vasquez

Foshay Learning Center
43751 South Harvard Blvd.
Los Angeles, CA 90018
213-735-0241
Principal: Howard Lappin

For more information, contact:

Greta Pruitt or Judy Johnson
Urban Learning Centers
315 West 9th Street, Suite 1110
Los Angeles, CA 90015
Phone: 213-622-5237
Fax: 213-629-5288
Web site: http://www.lalc.K12.ca.us

Matrix of Components

As noted in the General Introduction, to be eligible for funding under the Comprehensive School Reform Demonstration program (CSRD), a school's reform program must contain nine components:

1. Effective, research-based, replicable methods and strategies
2. Comprehensive design with aligned components
3. Professional development
4. Measurable goals and benchmarks
5. Support within the school
6. Parental and community involvement
7. External technical support and assistance
8. Evaluation strategies
9. Coordination of resources

It is important to recognize that these nine components apply to each *school's* reform program, not to the external model or models that the school chooses to adopt. However, it would be helpful for schools to have some idea of how well models under consideration are likely to assist them in addressing the components.

The matrix on the following page is a *initial attempt* to estimate the degree to which the 26 entire-school reform models included in this catalog address the nine components (except component number seven, which involves the school's use of external assistance and is therefore inapplicable to the external model itself). A full circle indicates that the model strongly addresses the component; a half circle indicates that the model addresses the component reasonably well; an empty circle indicates that the model addresses the component to a limited extent. (A rubric explaining the criteria for each component follows the matrix.)

As noted in the Preface and the General Introduction, the list of models included here is neither a set of recommended models nor a set of models approved for CSRD funding. There is no such list of "approved" models, and NWREL discourages states, districts, and others from using the list to limit the choice of research-based, effective models by schools that apply for funding under the CSRD program.

Estimation Procedures

Northwest Laboratory staff members made initial estimations based on the descriptions of the models included in this catalog. Prior to publication, developers had an opportunity to review their portion of the matrix. Needless to say, they did not always agree with the estimations their model received. Appeals were considered by an arbitration panel consisting of staff members from the Education Commission of the States and from the School Improvement Program and the Assessment and Accountability Program at the Northwest Laboratory. In some instances, developers provided additional information that led to a change in one or more estimations. In other instances, estimations did not change.

Limitations

It is important to note that initial estimations were based on written descriptions of models, and that appeals were based primarily on additional information provided by developers. There was no opportunity to examine the actual operation of any of the models in schools to determine how well execution corresponded with design. As additional information is gathered on

the models for the second edition of this catalog, and as the models themselves evolve, some of the estimations no doubt will change. In the meantime, readers are encouraged to approach this matrix in the spirit in which it was prepared: as one tool among many to help schools begin the process of matching their needs with appropriate external models of school reform.

Components of Comprehensive Reform: Entire-School Models[1]

Component	Indicator	Accelerated Schools	America's Choice	ATLAS Communities	Audrey Cohen	Coalition of Essential Schs.	Community for Learning	Community Learning Cntrs	Co-NECT	Core Knowledge	Different Ways of Knowing	Direct Instruction	Edison	Exp. Lrn. Outward Bound	Foxfire	High Schools That Work	High/Scope	League of Professional Schs	Modern Red Schoolhouse	Montessori	Onward to Excellence	Paideia	Roots & Wings	School Development Prgrm	Success for All	Talent Development H. S.	Urban Learning Centers
1. Effective, research-based methods	*has evidence of effectiveness in improving student achievement*	◗	◗	◗	○	○	◗	○	◗	◗	●	●	◗	◗	○	◗	◗	○	◗	◗	◗	○	●	●	●	○	○
	has been replicated in diverse schools (number and type)	●	●	◗	◗	●	●	○	●	●	●	●	◗	◗	●	●	●	●	◗	●	●	●	●	●	●	○	○
2. Comprehensive design	*contains schoolwide plan for curriculum, instruction, assessment, management, etc.*	●	●	●	●	●	●	●	●	◗	●	◗	●	●	○	●	◗	●	●	●	●	◗	●	●	◗	●	●
3. Professional development	*provides high quality, on-going training and technical assistance*	●	●	●	●	◗[2]	●	◗	●	◗	●	●[2]	●	●	◗	◗	●	◗	●	●[2]	◗	●	●	◗	●	●	◗
4. Measurable goals	*has (or helps schools develop) measurable goals for student performance*	●	●	◗	●	◗	●	○	●	●	●	●	●	●	○	●	◗	●	●	●	●	●	●	●	●	◗	○
5. Support within the school	*requires substantial support by faculty, administration, and staff*	●	●	●	◗	◗	◗	◗	●	●	●	●	●	●	○	●	◗	●	●	●	◗	●	●	◗	●	●	●
6. Parent and community involvement	*involves parents and community in school improvement activities*	●	●	●	◗	◗	●	●	◗	●	●	○	●	●	◗	◗	●	◗	●	◗	●	◗	●	●	●	●	●
7. External assistance	*uses external assistance from a comprehensive school reform model*	(This criterion applies exclusively to the school's program, not to the external model itself.)																									
8. Evaluation strategies	*evaluates (or helps schools evaluate) implementation and student performance*	●	●	●	●	◗	●	○	●	●	●	●	●	●	◗	●	●	●	●	●	●	◗	●	●	●	◗	◗
9. Coordination of resources[3]	*helps identify ways other resources (federal/state/local/private) can support reform*	●	●	◗	●	◗	●	○	◗	●	●	○	●	◗	○	◗	○	○	◗	◗	○	○	●	●	●	◗	●

[1]See the back of this page for a description of criteria for full circles, half circles, and empty circles.

[2]Services are provided by organizations that are independent or semi-independent from the national organization (e.g., autonomous regional centers). Thus, training and technical assistance may vary from organization to organization.

[3]This component was directed primarily toward school plans for comprehensive reform rather than toward the external reform model involved. Nevertheless, because some of the models offer assistance in this area, it has been included in the matrix.

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Criteria for the Nine Components

1a. ***Evidence of effectiveness***

● = (a) Impact on student achievement has been thoroughly evaluated using rigorous research designs (experimental/control or comparison groups) over several years and across multiple sites, (b) this research has yielded convincing evidence of significant and sustained student achievement gains, and (c) gains have been confirmed by third-party evaluators.

◗ = There is consistent evidence of student achievement gains relative to baseline data and/or district means using appropriate assessment instruments.

o = There is evidence of student achievement gains at some sites along with evidence of improvement on other indicators of student performance such as attendance or engagement.

1b. ***Replication in diverse schools***

● = Model has been replicated in at least 50 schools (total) including urban schools, rural schools, Title I schools, and schools with high proportions of English-language learners.

◗ = Model has been replicated in less than 50 schools or has not served all categories.

o = Model has been replicated in a small number of schools.

2. ***Comprehensive design***

● = Model addresses (or establishes a process to help schools address) curriculum, instruction, assessment, technology, classroom management, school management, professional development, and parental involvement, and other areas of school operations, all aligned into a schoolwide plan.

◗ = Model addresses most of the above areas.

o = Model addresses only a few of the above areas, involves only a few teachers, or is limited to one or two subject areas.

3. ***Professional development***

● = Model provides abundant, high-quality pre-implementation training and on-site follow-up coaching and technical assistance that addresses implementation and classroom issues. Full staff is involved.

◗ = Model provides high-quality pre-implementation training and on-site follow-up coaching to full or partial staff.

o = Model provides limited training and coaching.

4. ***Measurable goals***

● = Model has specific goals benchmarked to rigorous standards or a formal process to help school set such goals.

◗ = Model has less specific goals or a less formal goal-setting process.

o = Model has general goals.

5. ***Support within the school***

● = Buy-in process involves a formal determination of support at the school level (e.g., a vote by school faculty or a consensus-building process leading to an explicit decision supported by a majority of faculty).

◗ = Buy-in process involves informal mechanisms for ensuring schoolwide support.

o = Model has no process for ensuring schoolwide support.

6. ***Parent and community involvement***

● = Model uses multiple mechanisms for involving parents and community members in school improvement activities.

◗ = Model uses some mechanisms for involving parents in school improvement activities.

o = Model does not emphasize parent involvement.

7. ***External assistance***

Not applicable.

8. ***Evaluation strategies***

● = Model consistently evaluates implementation and student achievement at school sites and/or provides schools with a formal process for conducting their own evaluations.

◗ = Model sometimes evaluates implementation and achievement and/or assists schools in conducting evaluations.

o = Model does not emphasize formal evaluation.

9. ***Coordination of resources***

● = Model assists schools in analyzing, reconfiguring, and seeking sources of funding (federal/state/local/private).

◗ = Model offers some assistance in this area.

o = Not part of model's array of services.

Skill- and Content-Based Reform Models

Introduction: Skill- and Content-Based Reform Models

Models focusing on particular skills (e.g., higher-order thinking skills) or subject areas (e.g., reading or mathematics) have a longer history in school reform than entire-school models, and more of them exist. In and of themselves, these models generally lack sufficient breadth of impact on the entire school to provide a strong lever for broad-based reform. However, skill- and content-based models can serve as building blocks for such reform. Indeed, the Comprehensive School Reform Demonstration program allows for the use of funds to support schools that adopt skill- and content-based models, provided the models are integrated into a comprehensive school reform program that coherently addresses all nine components of comprehensiveness outlined in the law (see Appendix B).

Given a longer history and stronger focus on specific curriculum and instructional approaches, considerably more opportunity exists for these models to have demonstrated results over time. More stringent criteria for evidence of effectiveness can reasonably be applied to this grouping as a whole. The recent work by the state of Kentucky (Kentucky Department of Education, 1997), which included only those models that met very high standards for demonstrated student results, identified a number of models in this category, and many of those same models have been included in this initial listing.

Because these models, taken separately, are not expected to be as comprehensive as entire-school models, no matrix was created to assess the degree to which they addressed the nine components of comprehensiveness.

Reading/Language Arts Models

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Breakthrough to Literacy (K-2)

IN BRIEF Breakthrough to Literacy	
Developer	Carolyn Brown and Jerry Zimmermann, University of Iowa
Year Established	1981
# Schools Served (Jan. 1998)	over 1,100
Level	K-2
Primary Goal	teaching connection of oral language to print
Main Features	• daily story reading • interactive computer software • print materials to integrate computer curriculum • children progress at their own pace
Results	Breakthrough students in several districts have scored higher on standardized reading tests than control groups
Impact on Instruction	suggested routine for 10-15 minutes of reading interaction and 15-20 minutes on the computer (in reading classes only)
Impact on Organization/ Staffing	none
Impact on Schedule	none
Students Served	
Title I	yes
English-language learners	in the development stages
Urban	yes
Rural	yes
Parental Involvement	parents are asked to read to their child and listen to the child "read" to them every night
Technology	computer software is provided; 2-3 computers and 1 printer per classroom are necessary
Materials	provided

Origin/Scope

Breakthrough to Literacy was founded by Carolyn Brown and Jerry Zimmermann in 1981 at the University of Iowa. Since its initial implementation in Dallas public schools in 1994, Breakthrough (previously called Foundations in Reading) has been adopted in over 1,100 schools in 19 states, serving over 25,000 children.

General Description

Breakthrough to Literacy focuses on teaching pre-kindergarten through second grade students to relate oral language and pictures to print. The program provides each child, at his or her level of language/literacy development, stories and access to direct and explicit instruction for phonemic awareness. This is achieved through the use of "big books," pupil books, and computer modules.

The typical Breakthrough classroom focuses on one big book per week (10-15 minutes per day). The book is read to the children every day with a different objective. On Monday, for example, the objective is introduction. The teacher introduces the author and illustrator and reads the book to the students. They discuss what they liked or disliked about it and then the teacher reads it again. On Tuesday, the objective is review. The teacher asks the children to recall what they learned the previous day and to role play based on the story's characters. Wednesday, integration is the focus. The children are asked to relate what they've learned to something in their own lives. And so on through Friday.

Children also spend 15-20 minutes per day at the computer making connections between what they have "read" and what they see on the computer screen, and vice versa. When the teacher chooses a new big book, the children have already seen those words on the computer several times. This combination of literature-based instruction and instructional technology is intended to help the children develop better phonemic awareness, enhance their

vocabulary development, and promote an understanding of sound-symbol relationships. Children progress through the program at their own pace due to daily one-on-one sessions with teachers and computers.

The program does not end in the classroom, however. Parents are urged to read to their children and have stories "read" to them every night.

Results

Breakthrough's impact on student achievement has been measured using a number of assessment tools. In 1995-96, Dallas kindergartners using the program tested 12-20% higher in vocabulary, word analysis, and math on the Iowa Test of Basic Skills (ITBS) than children in control schools. In 1997, kindergartners in Virginia tested 10-35% higher than controls in vocabulary, listening, and word analysis on the ITBS. Also in 1997, a San Francisco kindergarten class testing 8-14% higher than controls on a Yopp-Singer Test of Phonemic Awareness.

Implementation

- ***Project Capacity:*** The developers are still located at the University of Iowa. Training and support is provided by The Wright Group of Bothell, Washington.
- ***Faculty Buy-In:*** Principals, teachers, and superintendents attend a meeting to decide if they want to use the program. The teachers must have support from the district and administration in order for the program to be successful.
- ***Initial Training:*** Training begins with a two-hour overview for the principals. The teachers receive a full day of training to help them set up Breakthrough to Literacy in their classrooms. This session is scheduled immediately before implementation. Literacy coaches, who are located close to the implementation sites, join with the teachers on their first day of implementation.
- ***Follow-Up Coaching:*** Four weeks after implementation, teachers spend another full day of training learning how to further integrate Breakthrough to Literacy in their classrooms. Eight weeks after implementation, the teachers attend a final full-day session learning to interpret Breakthrough to Literacy reports and developing specific lesson plans.
- ***Networking:*** Breakthrough to Literacy supports a 1-800 hotline and publishes a quarterly newsletter.
- ***Implementation Review:*** The developers receive progress reports and data from the districts directly. They also employ an independent quality assurance firm to assess progress in some districts.

Costs

Each classroom must have 2-3 computers and a printer. The computers need software that supports Breakthrough to Literacy software, which contains 24 stories and over 4,100 lessons. Each classroom receives 40 Big Books, 32 six-packs of little books, and 24 take-home books for each child. The estimated cost per classroom is approximately $12,500. Most funding is provided at the district level; however, some grants are provided to get the program up and running in some schools.

Student Populations

Breakthrough is designed particularly for low-income, inner-city, and rural students, including Title I children, although it has been used with children of all economic levels. A teacher in Texas uses Breakthrough as an ESL tool for his students.

Special Considerations

Parents must be willing to play a role in their child's literacy development.

Selected Evaluations

Developer
No published evaluations available.

Outside Researchers
No published evaluations available.

Sample Sites

Cedar Rapids Public Schools
346 Second Avenue SW
Cedar Rapids, IA 52404
319-398-2500
Contact: Wendie Riniker

Dallas I.S.D.
Nolan Estes Plaza
3434 R. L. Thorton Freeway
Dallas, TX 75224
214-989-8000
Contact: Robert Cooter

Norfolk Public Schools
800 East City Hall Avenue
Norfolk, VA 23510
800-874-2851
Contact: Vicki Hoffman

For more information, contact:

Henry Layne
The Wright Group
19201 120th Avenue NE
Bothell, WA 98011
Phone: 800-523-2371, ext. 3433
Fax: 425-486-7704

Carbo Reading Styles Program (K-8)

IN BRIEF Carbo Reading Styles Program	
Developer	Marie Carbo
Year Established	1975
# Schools Served (Jan. 1998)	approximately 1,000
Level	K-8
Primary Goal	to increase literacy by matching reading instruction to the student's preferred style of reading
Main Features	• teachers diagnose students' strengths and accommodate them with a range of effective reading strategies • Carbo Recorded-Book Method • comfortable, relaxed settings • individual and small group work
Results	documented gains in student reading achievement; students more motivated to read
Impact on Instruction	see Main Features
Impact on Organization/ Staffing	program is facilitated though teacher teams, teacher pairs that coach one another, mentor teachers for new teachers, and (sometimes) an on-site Reading Styles facilitator
Impact on Schedule	many Reading Styles schools use block scheduling to facilitate cooperative planning
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	strongly encouraged
Technology	none required, although the Reading Styles Inventory must be scored on computer
Materials	Reading Style Inventory, colored overlays, Carbo Recorded Books, tape recorders, listening centers, headsets, audio cassettes audio cassette dubbing machine, and laminating machine

Origin/Scope

The Carbo Reading Styles Program was developed in 1975 by Marie Carbo, founder of the National Reading Styles Institute. In 1981, approximately 20 schools adopted the Carbo Reading Styles Program. As of January 1988, the program has been implemented in approximately 1,000 schools.

General Description

The philosophy behind the Carbo Reading Styles Program (RSP) is to increase student literacy by making the process of learning to read so easy and enjoyable that students become motivated, confident, fluent readers in short periods of time. Research conducted by Carbo and her colleagues indicates that students have different learning styles for reading — or "reading styles" — that predispose them to learn far more easily with particular reading techniques. Therefore, no single reading method is best for every child, since children's individual strengths and interests vary widely. Consequently, teachers must master a wide range of reading strategies so that their reading program accommodates their students' varying reading styles. For example, many poor readers are global, tactile, kinesthetic learners. An ideal reading program for these youngsters would include large amounts of activity and holistic reading methods (e.g., choral reading, echo reading, recorded books).

To implement the program, RSP requires schools to use several key materials and strategies, including the Reading Style Inventory (RSI) and the Carbo Recorded-Book Method. The RSI provides teachers with a compact profile of a student's key strengths and weaknesses. It lists the top reading methods, materials, and strategies to best meet the

student's instructional needs. The RSI also provides teachers with a three-page, in-depth profile of a student.

The Carbo Recorded-Book Method is an integral part of RSP. After identifying books or reading materials of high interest to students, the teacher divides the materials into small segments. These segments are recorded onto a tape cassette in short phrases at a slightly slower speed than normal. The student listens repeatedly to the recording, later reading the passage aloud to the teacher. Carbo believes the recordings enable "any student to read immediately" and help to build a child's confidence. Also, students are reading something they find genuinely interesting.

Results

Studies show that RSP has resulted in high gains in student reading achievement scores, especially with students in the bottom third. Student achievement has been measured by standardized achievement tests, performance-based assessments, teacher and student attitude surveys, and teacher records. A 10-district national study of grades 1-9 conducted over two years (1992-1994), to be published in Phi Delta Kappa in the Spring of 1998, indicates that when schools implement RSP at the 85% level the result is "consistently higher achievement scores and gains than children in control program." Doctoral research indicates that at-risk students made 100%-200% higher gains with RSP than those made by students in control groups. Other studies show increased motivation among students to read on their own in the classroom and at home.

Implementation

- ***Project Capacity:*** RSP employs a small core group of full-time trainers and 30 part-time trainers. Plans are under way to expand the number of full-time trainers, as well as double the number of part-time trainers by September 1998.
- ***Faculty Buy-In:*** Teachers and administrators must possess a strong desire to improve their school's reading program. While it is possible for a single teacher to implement RSP at a high level, whole-building commitment brings higher levels of student success. No majority vote by school staff is required.
- ***Initial Training:*** A five-day training package is available, with additional days of technical assistance as requested by schools. Technical assistance includes team building, coaching, principal support, consultation, evaluation, follow-up training and demonstration lessons.
- ***Follow-Up Coaching:*** RSP trains one or more in-district reading styles facilitators to serve as ongoing support for the program.
- ***Networking:*** RSP offers regional seminars, an annual national conference, a Web site (including a discussion forum) and a quarterly national newsletter.
- ***Implementation Review:*** The Degrees of Reading Styles Implementation Checklist is the governing document in schools that implement RSP. This detailed checklist allows faculties to measure their implementation of RSP with those characteristics that have been proven to result in effective programs. The checklist may be used as a self-check or as part of an outside evaluation of the program.

Costs

Fees for RSP depend on the number of teachers and students participating, as well as the materials already available within a school or district. In general, however, the enrollment cost for the five-day training (including all training materials) is approximately $9,500 for 30 school faculty, plus $150 for each additional person. In addition to this, travel-related expenses may vary from approximately $1,000-$3,000, depending on the number of trips and the amount of travel required of the trainer. Classroom materials for the program cost about $250-$500 per teacher for the first year, and $200 per teacher for the second year. A one-time expense of approximately $4,000 may be required for a tape duplicator and a laminating machine for building use. The development of a Carbo Reading Styles Model School costs approximately $12,000-$20,000 beyond the fee for a standard five-day training.

Student Populations

RSP works with all students, but the majority of students are minorities from low income communities.

Special Considerations

The RSP program requires the following resources: Reading Style Inventory materials (text booklets and disks), Carbo Recorded Books, one listening center per classroom, one good-quality tape recorder for every five teachers, at least three to five tape players with headsets per classroom, at least 100 blank tape cassettes per classroom, one RSP Overlay Key per classroom. Teachers are also encouraged to create comfortable reading environments for students; for example, many RSP teachers have brought couches and pillows into the classroom.

Selected Evaluations

Developer

Barber, L., Carbo, M., & Thomasson, R. (In press). *A comparative study of the reading styles program to extant programs of teaching reading.* Bloomington, IN: Phi Delta Kappa.

Outside Researchers

LaShell, L. (1986). An analysis of the effects of reading methods on reading achievement and locus of control when individual reading style is matched for learning-disabled students. Doctoral dissertation, Fielding University.

Skipper, B. (1997). Reading with style. *American School Board Journal 184*(2): 36-37.

Sudzina, M. (1993). An investigation of the relationship between the reading styles of second-graders and their achievement in three basal reader treatments. (ERIC Document Reproduction Service No. ED 353 569)

Sample Sites

McGarrah Elementary School
2201 Lake Harbin Road
Morrow, GA 30260
770-968-2910
Contact: Bette Fleuren

O'Connor Elementary School
3204 Bobolink
Victoria, TX 77901
512-788-9572
Contact: Karen Floro

Stemley Road Elementary School
2760 Stemley Bridge Road
Talladega, AL 35160
205-362-9460
Contact: Vicki Oliver

For more information, contact:

Marian S. Gordon
National Reading Styles Institute
P.O. Box 737
Syosset, NY 11791
Phone: 800-331-3117
Phone: 516-921-5500
Fax: 516-921-5591
E-mail: nrsi@mindspring.com
Web site: http://www.nrsi.com

Cooperative Integrated Reading and Composition (CIRC): 2-8

IN BRIEF Cooperative Integrated Reading and Composition (CIRC)	
Developer	Center for Social Organization of Schools, Johns Hopkins University
Year Established	1986
# Schools Served (Jan. 1998)	about 1,000
Level	2-8
Primary Goal	improved reading and writing skills
Main Features	• story-related activities in teams • direct instruction in reading comprehension • integrated language arts/writing
Results	improved reading and writing achievement
Impact on Instruction	increased cooperative learning practices; focus on literature and basals; focus on higher-order learning
Impact on Organization/ Staffing	reorganizes classroom for student teamwork; requires no extra staffing
Impact on Schedule	longer reading periods are encouraged
Students Served	
Title I	yes
English-language learners	yes, through BCIRC
Urban	yes
Rural	yes
Parental Involvement	encouraged but not required
Technology	schools apply existing technology
Materials	teachers manuals; curriculum materials matched to basals and novels

Origin/Scope

Research and development on cooperative learning began at the Johns Hopkins University Center for Social Organization of schools in 1970. Cooperative Integrated Reading and Composition (CIRC) was developed in collaboration with schools during 1986-88 to provide elementary schools with a full comprehensive reading and writing curriculum based on research on cooperative learning and research on effective reading and writing practices. CIRC is now used in grades 2-8. Development of materials and processes has continued based on use of the program in schools. Program developers include Robert Slavin, Robert Stevens, Nancy Madden, and Anna Marie Farnish.

In 1987, research and development of Bilingual Cooperative Integrated Reading and Composition (BCIRC), the program's Spanish adaptation, was begun.

General Description

CIRC provides curricula and instructional practices for teaching reading and writing. The practices include use of reading groups, students working in teams, story-related activities, partner reading, story grammar and story-related writing, words-out-loud exercises, word meaning exercises, story retell, partner checking, regular assessment, direct instruction in reading comprehension, independent reading, and integrated writing and language arts. CIRC includes curriculum materials to be used in these processes.

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Results

Six studies have been conducted of CIRC reading, language arts, and writing outcomes in grades 2-8. The studies were large, with a median sample of 842 students, and long, with a median duration of one year. All six evaluations compared the performance of CIRC students to control students and primarily used norm-referenced standardized tests, especially the California Achievement Test subscales for reading vocabulary, reading comprehension, language mechanics, and language expression. The median effect size across all studies was +0.29. (An effect size of over +0.25 is generally considered educationally significant.)

The CIRC model is also used in grades 2-6 as part of the Success for All elementary school restructuring program and contributes to the achievement outcomes documented in grades 2-6 for that program (see the preceding discussion of Success for All).

Implementation

- ***Project Capacity:*** Trainers for CIRC are available from the Johns Hopkins University Center for Social Organization of Schools, and full sets of curriculum materials keyed to basal readers and to commonly used literature are available.
- ***Faculty Buy-In:*** Formal commitment to receive training is required — materials are not available without accompanying training. Awareness sessions are provided that include video and simulations, after which schools and individual teachers may decide on their use of the CIRC program.
- ***Initial Training:*** A two-day professional development workshop for teachers who will implement CIRC is required. The workshop is conducted by CIRC trainers at Hopkins or by turnkey trainers. Principal participation is highly encouraged.
- ***Follow-Up Coaching:*** Follow-up support is provided through trainer visits to the school to examine implementation and facilitate the use of CIRC. Telephone and e-mail contact are maintained.
- ***Networking:*** Some districts and regions have established local networks to support CIRC use. National cooperative learning networks have also been established. Information on CIRC is included on the Success for All Web site.
- ***Implementation review:*** In follow-up visits to schools, trainers use an implementation checklist and personal observation to review the implementation of the program.

Costs

Costs for training include payment of expenses and $800 per day trainer fee. Two days of training are required. Groups of up to 50 can be accommodated in a training workshop. Materials can be purchased for $600-$800 per classroom, but several classrooms can share one set of materials.

Student Populations

CIRC is appropriate for all students in grades 2-8. The program has been used with disadvantaged students and minority students, and has been shown to be very effective for mainstreamed students. BCIRC has been developed especially to serve English-language learners.

Special Considerations

Teachers must be open to the use of cooperative learning practices in their classrooms.

Selected Evaluations

Developer

Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice* (2nd edition). Boston: Allyn & Bacon. (presents summary of CIRC evaluations by the developer and outside researchers)

Stevens, R. J., Madden, N. A., Slavin, R. E., & Farnish, A. M. (1987). Cooperative integrated reading and composition: Two field experiments. *Reading Research Quarterly 22*, 433-454.

Outside Researchers

See first entry under Developer.

Sample Sites

CIRC is now being used in schools throughout the United States. Sample sites can be provided by the program trainer.

For more information, contact:

Dorothy Sauer
CIRC Program
Center for Social Organization of Schools
3505 North Charles Street
Baltimore MD 21218
Phone: 1-800-548-4998
Fax: 410-516-6671
Web site: http://www.successforall.com

Dr. Margarita Calderon
BCIRC Program
CRESPAR/SFA Regional Center
1816 Larry Hinson
El Paso, TX 79936
Phone: 915-595-5971
Fax: 915-595-6747
e-mail: MeCalde@aol.com or mcalderon@csos.jhu.edu

First Steps™ (K-10)

IN BRIEF First Steps™	
Developer	State Education Department of Western Australia
Year Established	1989
# Schools Served (Jan. 1998)	Over 191 districts in the USA
Level	K-10
Primary Goal	provide teachers with the tools to link assessment, teaching, and learning and maximize each child's growth in language and literacy
Main Features	• *Developmental Continua* in reading, spelling, writing, and oral language • direct links to developmentally appropriate teaching strategies and learning activities
Results	several studies have shown improvement in the reading abilities of First Steps students
Impact on Instruction	whole class, small group, and individual instruction
Impact on Organization/ Staffing	whole school participation recommended; First Steps tutor recommended to provide ongoing schoolwide support
Impact on Schedule	none
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	parents support student growth in literacy through information provided in *Parents as Partners* booklets and workshops
Technology	none required
Materials	teacher resource material; training materials provided for First Steps tutors

Origin/Scope

First Steps was developed in 1989 by the Education Department of Western Australia. It has been available in the United States since 1995 under the management of Heinemann USA. It is currently in use by over 600 schools in Australia, as well as in New Zealand, the United Kingdom, Canada, and throughout the English-speaking world. In the United States, over 191 school districts are using First Steps.

General Description

First Steps is a literacy resource that supports schools in helping children in kindergarten through tenth grade make progress in their language and literacy development. Specifically, First Steps concentrates on reading, writing, spelling, and oral language development. Three components form the core of First Steps:

- School development, which is incorporated into all First Steps training sessions to ensure that the whole staff can make informed, collaborative choices in response to student need;
- Professional development and ongoing support that emphasize the importance of theoretical understandings combined with sound practice; and
- Curriculum materials that consist of the *Developmental Continua* (a diagnostic framework that maps out the stages of language and literacy development) and resource books that complement the continua and provide teachers with additional developmentally appropriate activities.

Using the First Steps *Developmental Continua*, teachers, schools, and districts assess students' understandings and skills, select activities that link directly to assessment, and report student progress systematically and accurately to parents, school boards, and state departments of education.

Thus, First Steps serves both as a practical teaching resource and as a vehicle for accountability. It gives educators strategies for logically linking instructional activities to assessment. It enables all education stakeholders, including parents, to monitor the progress of children's language and literacy development. It provides continuity of assessment and teaching from year to year. And it creates a common language for teachers, principals, parents, and children regarding learning, assessment, and reporting. In addition, First Steps professional development models are customized to meet the individual needs of the schools and districts that implement them.

Results

Several studies conducted in Australia suggest that First Steps can benefit students. In one study, which based its conclusions on the TORCH reading comprehension test scores of year five students, First Steps students improved their reading ability more than students from non-First Steps schools. Another study, based on the Monitoring Standards in Education (MSE) Reading and Writing tests, found that after controlling for the impact of gender, race, language spoken at home, and years in Australia, there was a positive relationship between the degree of implementation of First Steps and student achievement. In a third study of two elementary schools' implementation of First Steps, pre- and post-profile results showed that every child who received First Steps instruction demonstrated growth in reading competence. (Growth was indicated by the achievement of specific First Steps indicators or by movement into the next First Steps developmental phase.) In addition, surveys of educators implementing the First Steps program revealed that around 70% felt the program was a success in their school.

Currently, Bank Street College of Education in New York, under the auspices of the U.S. Department of Education, is conducting a three-year U.S. study of the implementation of First Steps in a large urban school district.

Implementation

- ***Project Capacity:*** National headquarters in Portsmouth, New Hampshire; First Steps consultants located in California, Massachusetts, New Hampshire, Oregon, Texas, and Washington. First Steps consultants from Australia and the United Kingdom regularly conduct courses in the United States.
- ***Faculty Buy-In:*** Whole school participation in the program is highly recommended.
- ***Initial Training:*** *School-Based Courses* (professional development for all teachers in a school or district) require two days per component (reading, writing, spelling, or oral language). *Tutor Training Courses* (specialized training that certifies individuals to conduct school-based courses for teachers in their district) consist of an initial five day session, and another session several months later that is three and a half days long.
- ***Follow-Up Coaching:*** First Steps tutors are available to support educators within their district as they work to implement the program.
- ***Networking:*** First Steps supports a Web site, e-mail assistance, toll-free phone assistance from consultants, a newsletter, video conferences, regional conferences, and periodic mailings from Heinemann.
- ***Implementation Review:*** First Steps design and networking capabilities allow schools to self-monitor their implementation.

Costs

Costs for School-Based Courses range from $200 per person for groups of 40-50 participants to $260 per person for groups of 20-30 participants. The Tutor Training Course fee is $3,000 per participant.

Student Populations

First Steps has been successfully implemented in K-10 classrooms with a wide range of student populations. The *Developmental Continua* can be used with ESL students and those experiencing difficulties as well as with high achieving students.

Special Considerations

None.

Selected Evaluations

Developer

Deschamp, P. (1995). *Student achievement: A study of the effects of First Steps teaching on student achievement.* Perth, Australia: Education Department of Western Australia.

Deschamp, P. (1995). *A survey of the implementation of the literacy component of the First Steps project in WA.* Perth, Australia: Education Department of Western Australia.

Supporting linguistic and cultural diversity through First Steps: The highgate project. (1994). Perth, Australia: Education Department of Western Australia.

Outside Researchers

Australian Council for Educational Research. (1993). *Empirical validation of the First Steps spelling and writing continua.* Presented to the Curriculum Development Branch of Western Australian Ministry of Education.

Australian Council for Educational Research. (1993). *The impact of First Steps on the reading and writing ability of year 5 students.* An interim report to the Curriculum Development Branch of Western Australian Ministry of Education.

Australian Council for Educational Research. (1993). *The impact of First Steps on schools and teachers.* An interim report to the Curriculum Development Branch, Western Australian Ministry of Education.

Sample Sites

Beaverton School District
16550 SW Merlo Road
Beaverton, OR 97006
503-591-4374
Contact: Linda Hoyt

Everett School District
3715 Oaks Avenue
Everett, WA 98203
425-339-4695
Contact: Anne Timm or Kay Cushing

Portland Public Schools
501 North Dixon Street
Portland, OR 97227
503-916-2000
Contact: Carolyn Moilenan

For more information, contact:

Dennis Jackson or Kevlynn Annandale
First Steps
361 Hanover Street
Portsmouth, NH 03801
Phone: 800-541-2086 (Jackson, ext.118, Annandale, ext.135)
Fax: 800-354-2004
E-mail: firststeps@heinemann.com
Web site: http://www.heinemann.com/firststeps

National Writing Project (K-16)

IN BRIEF National Writing Project	
Developer	James Gray, University of California, Berkeley
Year Established	1974
# Schools Served (Jan. 1998)	160 sites
Level	K-16
Primary Goal	improving the teaching of writing
Main Features	• teachers-teaching-teachers model of professional development • local and national networks of exemplary practitioners • professional development programs designed collaboratively with schools and districts to reflect local needs • writing promoted as a tool for learning across the curriculum
Results	in two studies, NWP students (including English-language learners) have had higher grades, writing assessment scores, and/or college placement rates than control groups
Impact on Instruction	provides strategies for linking instruction, curriculum, standards, and assessment in the teaching of writing
Impact on Organization/ Staffing	none required
Impact on Schedule	none required
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	professional development programs can be designed with parent engagement components
Technology	professional development programs can be designed with technology components
Materials	none required

Origin/Scope

The National Writing Project (NWP) began in 1974 at the University of California, Berkeley where its founder, James Gray, established a program for K-16 teachers called the Bay Area Writing Project. The NWP has now been replicated at 160 sites in 46 states and Puerto Rico.

General Description

The NWP has three major goals: (a) to improve the teaching of writing at all grade levels, (b) to improve professional development programs for teachers, and (c) to improve the professional standing of classroom teachers. Writing Project sites are typically housed in universities and serve multiple schools and school districts. Local sites accomplish these goals by supporting a K-16 network of exemplary teachers of writing who are able to work with schools around their professional development needs.

In practice, each local site identifies and recruits exemplary teachers for an annual invitational institute on its campus. Most often held in the summer, this intensive institute convenes teachers to demonstrate and examine their approaches to teaching writing; consider strategies for using writing as a tool in all subject areas; learn about how to teach writing by writing themselves; study theory and research underpinning best practices in the teaching of writing; and prepare themselves to lead professional development programs in the schools during the academic year.

Writing project workshops in the schools, then, are characterized first by the fact that they are taught by credible teachers — the graduates of the invitational institutes. Second, these workshops are tailored to the needs of the contracting school or district. The local project works in concert with the school faculty to design full professional development

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programs with sessions matched to the school, teacher, and student context. Programs are conducted in a series, rather than as one-shot events, so that teachers can receive support as they make changes in their practices. Third, writing project programs can be designed to include features like peer coaching or to work with regular school support structures like school improvement committees or grade level teams.

National Writing Project sites also provide an array of other programs to serve individual teachers and schools, such as open enrollment summer institutes, teacher research groups, assessment workshops, emergent literacy programs, a series on writing across the curriculum, support for new teachers, writing and reading conferences, young writer's programs, seminars and study groups, and parent workshops. Program offerings at local sites typically reflect the needs and interests of teachers in their service areas.

Results

The NWP has a number of studies of impact on student performance and behavior. In a current study, 770 students in the Santa Ana Unified School District (SAUSD) are participating in the UCI Writing Project's Pathway Project. The goal of the project is to enhance the reading and writing skills of second-language learners, who represent 72% of SAUSD students, and to prepare them to become college bound. In the pilot year:

- Pathway students had better attendance rates and higher end-of-year GPAs than comparable control students, and they had improved one-half to one full letter grade on a pre-and post-test analytical writing sample;
- 25% of graduates attending Santa Ana College placed in Freshman Composition as opposed to the overall SAUSD placement rate of 4%; and
- 12% of graduates were accepted at UC campuses as opposed to the SAUSD overall acceptance rate of 3-6%.

In Baltimore, the Abell Foundation sponsored an evaluation of the effectiveness of an NWP-sponsored program, Write to Learn. The evaluation study, which used a controlled comparison school design, focused on the effect of training experiences on the practice of teaching writing and whether student achievement in writing improves as a result. Students participating scored 18 points higher on a direct assessment of writing than comparison students and were much more likely to plan, revise, and edit their writing. In the study of teacher practices that relied on portfolios, self-report, and observation to identify teacher adoption of effective practices in the teaching of writing, language arts teachers scored 25% higher than their comparison colleagues on an assessment of practice, and content area teachers scored 40% higher.

Implementation

- ***Project Capacity:*** Each local site supports its own cadre of teacher leaders who develop and conduct programs suited to the needs of the community it serves. Overall, 10,312 teacher leaders conducted NWP programs in 1996-97 for 149,396 participants across the country.
- ***Faculty Buy-In***: Many programs are open to individual teachers or teacher teams at local sites. Schools can contract with writing projects to provide inservice programs according to faculty needs. There is no requirement for whole school participation.

- ***Initial Training:*** Teachers can receive initial training in approaches to the teaching of writing or in using writing as a tool for learning across the disciplines through open enrollment summer institutes and school year inservice programs. Many writing projects also sponsor conferences and weekend workshops.
- ***Follow-Up Coaching***: Follow-up programs, including coaching and action research, can be built into the inservice design at the request of the contracting school or district.
- ***Networking***: Nationally, the NWP hosts a yearly meeting as well as conferences and retreats for teacher leaders. The NWP publishes two journals, *The Quarterly* and *The Voice,* and a series of books on the teaching of writing. The NWP web site supports electronic networking among teachers across the 160 local sites.
- ***Implementation Review:*** Local sites conduct evaluations of all their programs. The NWP conducts an annual three-day review of every site. Forty reviewers read site reports and study site data collected by an independent evaluator, Inverness Research Associates.

Costs

Local NWP sites set the fees for their services. Teachers contribute $10 per year, host institutions of local NWP sites pay $150 per year, and contributing sponsorships make up a third funding category.

Student Populations

The NWP serves teachers across the country. Teacher leaders associated with a local site draw on experience with a wide range of students and school contexts. The NWP also supports specific networks for sites focused on professional development in urban schools and in rural schools, and programs for teachers in districts with a high proportion of students in poverty and for teachers of English language learners. National student data for the 1997 leadership cadre report 20.2% Title 1; 40.5% AFDC; 12.5% LEP.

Special Considerations

None.

Selected Evaluations

Developer

Eidman-Aadahl, E. (1990). *Summary report: The evaluation of the Write to Learn Program, second year.* Baltimore: Abell Foundation. (Available from the Maryland Writing Project, Towson State University).

Outside Researchers

None available.

Sample Sites

Bay Area Writing Project
5511 Tolman Hall, #1670
University of California
Berkeley, CA 94720
510-642-0963

Maryland Writing Project
College of Education
Hawkins Hall 301
Towson State University
Towson, Maryland 21204
410-830-3593
Director: Maggie Madden

Writing Improvement Network
Carolina Plaza, 937 Assembly
Columbia, SC 29208
803-777-0340
Directors: Libby Carnohan
Lyn Z. Mueller

For more information, contact:

Richard Sterling
Executive Director
National Writing Project
5511 Tolman Hall, #1670
University of California
Berkeley, CA 94720
Phone: 510-642-0963
Fax: 510-642-4545
E-mail: nwp@socrates.berkeley.edu
Web site: www-gse.berkeley.edu/Research/NWP/nwp.html

Reading Recovery (first grade)

IN BRIEF Reading Recovery	
Developer	Marie Clay
Year Established	1984 (United States)
# Schools Served (Jan. 1998)	9,815
Level	first grade
Primary Goal	to bring first grade students who are having difficulty learning to read and write to the average level of their class as quickly as possible (12-20 weeks)
Main Features	• one-to-one tutoring program • individualized instruction • specially trained teachers
Results	83% of the children who receive a complete program achieve the program goal
Impact on Instruction	no necessary impact on regular reading classroom instruction, though number of low-performing students is reduced
Impact on Organization/ Staffing	opportunity for highly focused professional development
Impact on Schedule	30-minute pull-out lessons; Reading Recovery teachers are expected to work at least one-half of each day in Reading Recovery
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	daily reading and reconstruction of cut-up sentence written by the students; occasional observation of lessons
Technology	minimal requirements: completion of scanable reporting forms to follow students' progress
Materials	little books, writing materials, easel, magnetic letters, markers, erasable board, reporting forms; one-way mirror at training site

Origin/Scope

Reading Recovery was developed by New Zealand educator and psychologist Marie M. Clay. The program came to the United States via Ohio State University in 1984. In the 1996-97 school year a total of 9,815 U.S. schools were using Reading Recovery in 48 states plus the District of Columbia and Department of Defense Dependent Schools (DoDDS).

General Description

Reading Recovery is an intensive early intervention literacy program. First-grade children who score in the lowest 20% of their class (based on individual measures of assessment and teacher judgment) are eligible to participate. Their regular classroom instruction is supplemented with daily one-to-one, 30-minute lessons for 12-20 weeks with a specially trained teacher.

Reading Recovery lessons provide children with individualized instruction that focuses on their strengths, experience with books and stories, accelerated learning expectations, and strategies that help them become independent learners. Each day, Reading Recovery teachers record the details of every lesson they provide. Instruction continues until participants can read at or above the class average, and demonstrate the use of independent reading and writing strategies. The student is then "discontinued," thus providing the opportunity for another child to enter Reading Recovery.

Typically, Reading Recovery teachers spend a half-day teaching Reading Recovery lessons and a half-day in other instructional activities. Each Reading Recovery teacher is expected to serve at least eight children over the course of one academic year.

Results

Reading Recovery students are assessed through the Observation Survey (a literacy assessment developed by Clay that includes reliable and valid indices), where they are compared to their class average at the beginning and end of the school year. Of over 4,000 Ohio students discontinued from Reading Recovery in 1996-97, year-end testing showed 88% scoring in the average band for writing vocabulary, 97% for hearing and recording sounds in words, and 91% for text reading level on the Observation Survey.

Of all students nationwide who entered Reading Recovery in 1996-97, 60% achieved the average of their class. Of students who received a full program with an opportunity to participate for 20 weeks, 83% achieved the average reading level of their class. In follow-up studies in Texas (using the Texas Assessment of Academic Skills) and Massachusetts (using Gates MacGinitie and Slosson Test of Word Recognition), discontinued children scored within the average band of their peers on standardized tests in second, third, and fourth grades. In Ohio a recent study examined the progress of all Reading Recovery students on fourth grade proficiency tests. The results indicate that all students made substantial gains in reading and writing as demonstrated on the fourth grade proficiency test performance.

Implementation

- ***Project Capacity:*** 23 University Regional Training Centers that offer training for Reading Recovery Teacher Leaders; 429 teacher training sites; 16,548 total trained and active Reading Recovery professionals throughout the U.S. and the DoDDS.
- ***Faculty Buy-In:*** Sites make commitments to train teacher leaders and teachers, and to continue the program beyond the initial training year. Continued collaboration between Reading Recovery professionals and classroom teachers is critical.
- ***Initial Training:*** Initial training for teacher leaders, who are post-master's degree teachers, takes one year, provides 21 graduate credit quarter hours, and is located at one of the 23 University Training Centers. Initial training for Reading Recovery teachers includes a year-long program of training provided by trained teacher leaders. This training provides the teachers with nine graduate quarter credit hours. It includes weekly training, teaching, and reflective and analytical discussions.
- ***Follow-Up Coaching:*** Following the training year, teacher leaders participate in professional development programs provided by the University Regional Training Centers. Trainers from these centers are available to assist the teacher leaders as needed. Reading Recovery teachers are expected to participate in continuing contact with the teacher leader, which consists of a minimum of six sessions. Teachers also are encouraged to attend at least one Reading Recovery conference during the year.
- ***Networking:*** Reading Recovery supports an annual Teacher Leader Institute and professional development programs for teacher leaders; various Reading Recovery conferences are held throughout the country each academic year; newsletters, a professional journal, and other focused publications are also available.
- ***Implementation Review:*** The University Regional Training Centers are responsible for ensuring effective site implementation of Reading Recovery. The program is monitored through site visits to teacher leaders and through statewide implementation visits conducted by specially-trained Reading Recovery trainers of teacher leaders. In addition, the program collects entrance and exit data on every child in the program,

and analyzes it at the school, district, site, state, and national levels on an annual basis.

Costs

Reading Recovery costs include those associated with the establishment of a site and the ongoing costs of site maintenance. Start-up (one-time) costs include the salary of the teacher leader in training, tuition (estimated at $1,200), books and materials ($2,000), living expenses for the teacher leader in training while at the University Training Center, and the cost of building a one-way glass and sound system (estimated at $2,500) at the new site for teacher training. Following the teacher leader training year, costs include professional development for the teacher leader, site staff support, tuition for teacher training, and training materials. Teacher costs include materials, supplies, and tuition. The Reading Recovery trademark is royalty free and dependent only on meeting established guidelines and standards.

Student Populations

In addition to serving any student with demonstrated need, Reading Recovery training and materials are also available in Spanish (Descubriendo La Lectura).

Special Considerations

Some training outside of school hours may be necessary, and may include travel. Reading Recovery involvement requires parental permission. This permission includes a commitment from the parent to assist the child in daily reading activities as a follow-up to the daily Reading Recovery lesson. Schools and parents must be willing to have students transported to the "behind the glass" sessions for lessons during the training and continuing contact process.

Selected Evaluations

Developer

Pinnell, G., McCarrier, A., & Button, K. (1990). *Teachers' application of theoretical concepts to new instructional settings* (Report No. 8, Early Literacy Research Project). Columbus, OH: Ohio State University.

Lyons, C., & Beaver, J. (1995). Reducing retention and learning disability placement through Reading Recovery: An educationally sound cost-effective choice. In R. Allington and S. Wamsley (Eds.), *No quick fix: Redesigning literacy programs in America's elementary schools* (pp. 116-136). New York: Teachers College Press and the International Reading Association.

Outside Researchers

Escamilla, K. (1994). Descubriendo La Lectura: An early intervention literacy program in Spanish. *Literacy, Teaching and Learning: An International Journal of Early Literacy, 1,* 57-85.

Jaggar, A., & Simic, O. (1996). *A four-year follow-up study of Reading Recovery children in New York state: Preliminary report.* New York: University Reading Recovery Project, School of Education.

Stringfield, S., Millsap, M. A., Herman, R., Yoder, N., Brigham, N., Nesselfodt, P., Schaffer, E., Karweit, N., Levin, M., & Stevens, R. (1997). *Urban and suburban/rural special strategies for educating disadvantaged children: Final report.* Washington, DC: U.S. Department of Education.

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Sample Sites

Fort Bend I.S.D
PO Box 1004
Sugarland, TX 77487-1004
Site Coordinator: Mary Jackson
281-634-1134

Marion County School District
910 East Church Street
Marion, OH 43302
Site Coordinator: Douglass Kammerer
614-387-3300

San Luis Coastal Unified School District
348 Los Osos Valley Road
Los Osos, CA 93402
Teacher Leader: Wayne Brown
805-528-5606

For more information, contact:

Jean F. Bussell, Executive Director
Reading Recovery Council of North America
1929 Kenny Road, Suite 100
Columbus, OH 43210-1069
Phone: 614-292-1795
Fax: 614-292-4404
E-mail: bussell.4@osu.edu

Strategic Teaching and Reading Project (K-12)

IN BRIEF Strategic Teaching and Reading Project	
Developer	North Central Regional Educational Laboratory
Year Established	1987
# Schools Served (Jan. 1998)	approximately 150
Level	K-12
Primary Goal	to improve instruction through sustained staff development and improve students' reading abilities across content areas
Main Features	• combines instructional improvement and professional development • uses five comprehension strategies as a framework for improved teaching and learning in all content areas • works with existing curriculum and instructional materials • adapts to local and state learning objectives
Results	improved reading comprehension as measured by standardized tests in elementary and secondary schools in several states
Impact on Instruction	maintains teachers' freedom and creativity; encourages strategic teaching and continual learning
Impact on Organization/ Staffing	none
Impact on Schedule	requires sustained professional development opportunities
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	no formal parent component yet
Technology	none required
Materials	guidebook, set of six audio tapes, introductory videotape

Origin/Scope

Formerly known as the Rural Schools Reading Project, the Strategic Teaching and Reading Project (STRP) began in 1987. It was developed by the North Central Regional Educational Laboratory in partnership with the Wisconsin Department of Public Instruction, the Wisconsin Educational Communication Board, and 17 rural Wisconsin schools. As of January 1998, approximately 150 schools and districts and some 2,400 teachers in 14 states were using STRP.

General Description

STRP is an instructional improvement and professional development project. Optimized by a student-centered classroom, STRP can be integrated into all grades, in all content areas, and across the disciplines. Based on a definition of reading that focuses on a process of building meaning rather than on the application of a set of skills, STRP has at its core five comprehension strategies that help students make sense of the variety of materials they read: (a) using metacognition, (b) activating prior knowledge, (c) making inferences, (d) finding word meaning, and (e) understanding text structure. In essence, these strategies are *learning* strategies — strategies that are suitable for all content areas. Teachers present these comprehension strategies in an authentic context and in a way that is connected with what students already know.

STRP provides teachers with a framework to help students learn how, when, and where to use the skills and approaches that will lead to an understanding of what they read. Teachers are supported by a five-phase professional development model that encourages them to become strategic teachers and continual learners. By developing and supporting a

core team of teachers, STRP helps create a mechanism for training new teachers as they arrive, thereby sustaining a coherent instructional approach.

STRP works with any existing curriculum and instructional materials, and it adapts to local and state learning objectives. Successful implementation of STRP depends upon a school context that supports change, a willingness to implement it, a supportive administration, and sustained professional development opportunities.

Results

STRP has measurably improved student reading comprehension, as evidenced by evaluations across a broad range of school and student types. In a 1993 assessment pilot with a sample of 235 students in three STRP schools and three non-STRP schools in Illinois, Indiana, and Ohio, STRP students performed significantly higher on open-ended tasks that required them to interpret, link text to personal experiences, summarize, and provide supporting evidence from the text. A 1995 replication of the 1993 pilot study revealed that 40% of STRP students performed at proficient or advanced levels, while only 14% of the non-STRP students scored as high. Only 2 out of 10 STRP students performed at below the basic level compared to 51% of the non-STRP students.

In Michigan, the state standardized test aligns with STRP. Although the statewide percentage of students scoring at the highest level on the Michigan Educational Assessment Program (MEAP) tests remained stable from 1992 to 1995, all 30 STRP schools saw a substantial gain in overall student performance (according to reports from the schools). All three STRP high schools, 50% of STRP middle schools, and 56% of STRP elementary schools reported upward trends in the percentage of students achieving "satisfactory," the highest performance level on the MEAP. Increases for schools involved in STRP for three years ranged from 14.1 to 68.5, with an average of 34.3 percentage points. Increases for schools involved in STRP up to two years ranged from 3.0 to 10.0, with an average of 7.4 percentage points.

Implementation

- ***Project Capacity:*** Although STRP has not been aggressively marketed in the past, the North Central Laboratory works to provide any potential site with customized service. To increase STRP project capacity, plans are underway to recruit and train STRP trainers across the country, to provide STRP training via distance-learning technology, and to issue license agreements to intermediate service agencies. There are already two such license agreements in effect — one with the Metro ECSU in Minnesota, the other with Pacific Resources for Education and Learning in Hawaii.
- ***Faculty Buy-In:*** No formal buy-in is required for STRP at this time. Training can be provided to some or all teachers in a given site. Interested sites must show some evidence that the school climate supports change.
- ***Initial Training:*** STRP training varies depending upon requested level of implementation. *STRP Complete* consists of on-site service over a total of 10 days, including a general awareness session for the entire school community, a planning session with school staff, three days of training for all faculty, and six days of follow-

up with a core team of four to six teachers. *STRP Basic* is designed for schools with a strong leadership team already in place. It offers an on-site overview for all faculty, and three days of training with three days of follow-up for the core team. *STRP Institute* offers a week-long program for two consecutive summers. This approach offers off-site training for school teams of three or more teachers and requires a minimum of two days of on-site follow-up per year by the North Central Laboratory. Selection of one of the three described training options is not mandatory, however. STRP training can be customized to fit the needs of any site.

- ***Follow-Up Coaching:*** See the preceding paragraph for a description of follow-up coaching involved with the various professional development plans during the first year. Schools may contract for follow-up support beyond the first year.
- ***Networking:*** STRP supports a Web site and phone support, and will offer a CD-ROM/Internet supported network with examples of STRP classrooms in 1999.
- ***Implementation Review:*** Present efforts are informal and inconsistent.

Costs

STRP costs vary depending upon the number of participants, the degree of customization for each site, and the level of implementation selected by the site. *STRP Complete* ranges from $20,000 to $25,000 annually; *STRP Basic* is approximately $12,000 per year; and *STRP Institute* is approximately $1,500 per year plus on-site follow-up at $1,000 per day. Other fees may include travel expenses, professional development, teacher release time, and additional materials.

Student Populations

STRP has been implemented in sites with disadvantaged students, minority students, English-language learners, Title I schools, and in urban, suburban and rural schools

Special Considerations

STRP works best in student-centered classrooms and relies on a sustained effort of ongoing professional development opportunities for those who implement it.

Selected Evaluations

Developer

Winking, D., & Quinn, D. (1995). *Using multiple measures to evaluate the impact of strategic teaching on student learning.* NCREL Evaluation Studies.

North Central Regional Educational Laboratory. (1991). *Rural schools reading project.* Proposal and answers to reviewers' questions as submitted to the Program Effectiveness Panel, United States Education Department Recognition Division.

Outside Researchers

None available.

Sample Sites

Oregon-Davis School District
PO Box 65
Hamlet, IN 46532
219-867-2711
Contact: Shirley Cardinal (teacher)

School District of Stratford
PO Box 7
Stratford, WI 54484
715-687-3535
Contact: Barbara Gaulke, Principal and Reading Specialist

David Kibbey
Former Curriculum Director for Area F, Detroit Public Schools
PO Box 245
Southfield, MI 48037

For more information, contact:

Marianne Kroeger
North Central Regional Educational Laboratory (NCREL)
1900 Spring Road, Suite 300
Oak Brook, IL 60523-1480
Phone: 630-571-4700
Fax: 630-571-4716
E-mail: kroeger@ncrel.org
Web site: http://www.ncrel.org

Mathematics Models

Comprehensive School Mathematics Program (K-6)

IN BRIEF Comprehensive School Mathematics Program	
Developer	Mid-continent Regional Educational Laboratory
Year Established	1972
# Schools Served (Jan. 1998)	550
Level	K-6
Primary Goal	to provide a complete K-6 mathematics program for students of all ability levels that develops a broad and balanced range of skills
Main Features	• focus on problem-solving • unified, spiral approach • pedagogy of situations • use of non-verbal languages and instructional tools • whole group, small group, and individual instruction • balanced approach to concepts, skills, and applications
Results	CSMP students have fared better than control students applying what they've learned to word problems, prediction, pre-algebra, and other problem situations
Impact on Instruction	see Main Features
Impact on Organization/ Staffing	local CSMP coordinator
Impact on Schedule	none
Students Served	
Title I	yes (adapted)
English-language learners	yes (adapted)
Urban	yes
Rural	yes
Parental Involvement	parent communications (letters, home activities); parent workshops
Technology	instructional tools such as the Papy Minicomputer and calculators; options for use of computer software programs
Materials	complete classroom materials, teacher workshop materials, supplemental materials

Origin/Scope

The Comprehensive School Mathematics Program (CSMP) is both the name of a curriculum and the name of the project responsible for developing the curriculum materials. The portion of the project devoted to the elementary curriculum began in 1972 at CEMREL, one of the national educational laboratories funded at the time by the U.S. Office of Education.

In 1978, CSMP's K-3 curriculum was approved by the Joint Dissemination Review Panel as a nationally validated program, marking the beginning of full scale dissemination. The full K-6 program was approved in 1984. From 1992-97, the Mid-continent Regional Educational Laboratory (McREL) conducted further development activities to update CSMP to the current CSMP/21 edition. CSMP is presently in use in over 500 schools in 35 states.

General Description

The Comprehensive School Mathematics Program (CSMP/21) is a K-6 elementary mathematics program that focuses on problem solving and concept development. Its approach is designed to help even very young children grasp mathematical concepts and ideas through the use of a variety of situational teaching methods. These include graphic, non-verbal "languages"; colorful and unusual manipulatives; and even fantasy stories to activate the imagination of young children and engage them in an exploration of mathematics.

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CSMP emphasize a three-level approach to learning: understanding content and applications; developing techniques and processes for learning content; and applying the appropriate means to solve problems. The idea is that mathematics is best learned when applications are presented that are appropriate to students' levels of understanding and to their natural interests.

Results

In MANS Tests (Mathematics Applied to Novel Situations) developed and administered by an independent evaluation group at CEMREL, CSMP students fared better than control class counterparts in three areas:

- CSMP students were better able to apply the mathematics they had learned to new problem situations, using processes involving number patterns and relationships, estimation, representations of number, mental arithmetic, word problems, producing multiple answers, pre-algebra, and prediction;
- CSMP students performed in traditional arithmetic skills as well as non-CSMP students, having higher computation scores in three of five grades; and
- CSMP students showed a higher level of enthusiasm and interest in math than did comparable students in more traditional programs.

Implementation

- ***Project Capacity:*** McREL houses national dissemination activities for CSMP and maintains the CSMP Network. There are approximately 25 certified CSMP trainers in school districts or institutions of higher education. Districts implementing CSMP identify a local coordinator who becomes the CSMP Network contact and the local trainer.
- ***Faculty Buy-In:*** To implement this program, a school or district should appoint a CSMP coordinator (district math coordinator, lead teacher, math specialist) and agree on an implementation plan that provides for teacher in-service, evaluation of the program, technical assistance, and support services.
- ***Initial Training:*** CSMP recommends special preparation on the part of teachers before implementation. There are two basic workshops — one for the primary (K-3) program and one for the intermediate (4-6) program. Each workshop covers an introduction to the program and its pedagogical tools. There is also time for discussion on classroom management, organization, assessment, parent communication, and so on. CSMP offers several different types of workshops: one-week programs for district coordinators who will in turn train their local teachers; direct inservice workshops at district locations; and courses at some educational institutions based on the CSMP inservice workshop model. Depending on the grade level of implementation, between 12 and 30 hours of in-service are recommended.
- ***Follow-Up Coaching:*** CSMP staff are available for follow-up visits to provide additional staff development, give demonstration lessons, work with the local coordinator in providing support to teachers, or provide other technical assistance.
- ***Networking:*** CSMP supports a Web site, publishes a newsletter, has a listserv, and maintains a CSMP Network.

- ***Implementation Review:*** Once a year, along with one issue of the newsletter, CSMP conducts an annual usage survey. The survey requests information on numbers of classrooms, schools, teachers using the program, demographic information on the site, workshop information on how teachers were prepared, and local evaluation results.

Costs

Every CSMP implementation has costs for materials and training. There are no special equipment costs except that the program assumes a number of usual classroom items such as calculators and some common manipulatives.

Printed material includes extensive teachers' guides with suggested student-teacher dialogues for each lesson; student storybooks, workbooks, story-workbooks, and worksheets; and in-service teacher training kits for local coordinators. In addition, most essential demonstration material, instructional tools, and manipulatives are either provided with classroom sets or are common mathematics materials. Classroom installation prices (1997) for one teacher and 30 students range from $175 for kindergarten up to $495 for sixth grade.

If a district sends a coordinator to McREL or elsewhere for training, it must pay for travel and materials; however, the training workshop itself is usually free. That coordinator can then train local teachers. Expenses connected with local inservice differ from district to district according to policy on inservice pay, substitutes, etc. If a district has its teachers trained directly by a CSMP staff member or affiliate, there is a training fee (negotiated) plus expenses.

Student Populations

CSMP/21 is a complete K-6 mathematics program for students of all ability levels. In most cases, it is used in a regular heterogeneous classroom, but it has been adapted to a number of specialized audiences, including gifted students, compensatory education groups, and bilingual populations. Sites include urban settings, suburban communities, small and medium size cities, and rural districts. Schools are mostly public, but include private and parochial as well.

Special Considerations

Schools implementing CSMP/21 should plan for the preparation of teachers (workshops) and expect that teachers will need time to get familiar with the spiral approach, the languages and tools, and the classroom materials.

Selected Evaluations

Developer

Mid-continental Regional Educational Laboratory. (1978). *Submission to Joint Dissemination Review Panel, U.S Department of Education*. Aurora, CO: Author.

Mid-continental Regional Educational Laboratory. (1984). *Submission to Joint Dissemination Review Panel, U.S Department of Education*. Aurora, CO: Author.

Mid-continental Regional Educational Laboratory. (1992). *Submission to Joint Dissemination Review Panel, U.S Department of Education*. Aurora, CO: Author.

Outside Researchers

Martin, H. (1984). *Comprehensive School Mathematics Program: Final evaluation report*. Aurora, CO: Mid-Continental Regional Educational Laboratory.

Martin, H. (1993). *CSMP summary evaluation report Guilderland CSD, 1982-92*. Aurora, CO: Mid-Continental Regional Laboratory.

Martin, H. (1994). *CSMP evaluation report Hillsbourough Township Schools, 1990-94*. Aurora, CO: Mid-Continental Regional Laboratory.

Sample Sites

Guilderland Central SD
6076 State Farm Road
Guilderland, NY 12084
518-456-6200
Contact: Nancy Andress

Ladue Public Schools
9703 Conway Road
St. Louis, MO 63124
314-994-7080
Contact: Mary Aspedon

Yavapai Elementary
701 North Miller Road
Scottsdale, AZ 85254
602-423-3250
Contact: Dottie Gietler

For more information, contact:

Clare Heidema
McREL - CSMP
2550 South Parker Road, Suite 500
Aurora, Colorado 80014
Phone: (303)632-5520
Fax: (303) 337-3005
E-mail: cheidema@mcrel.org
Web site: http://www.mcrel.org/products/csmp

Connected Mathematics Project (6-8)

IN BRIEF Connected Mathematics Project	
Developer	Connected Mathematics Project, based at Michigan State University
Year Established	1991
# Schools Served (Jan. 1998)	approximately 2,200 schools
Level	6-8
Primary Goal	to help teachers and students develop deep and long-lasting mathematical understanding, reasoning, and skills
Main Features	• "investigations," or explorations of rich problems that embody important mathematical concepts • connections among ideas • emphasis on inquiry • multi-dimensional assessment package
Impact on Instruction	see Main Features; also requires use of graphing calculators
Impact on Organization/ Staffing	none
Impact on Schedule	designed for average class periods; however, periods of 60+ minutes are desirable
Results	CMP participants significantly outperformed comparison students on problem solving and proportional reasoning measures; eighth-grade CMP students significantly outperformed non-CMP counterparts on the ITBS
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	schools are encouraged to use *Getting to Know CMP* to acquaint parents with CMP materials and ideas for helping their children
Technology	scientific calculator for grade 6; graphing calculator for grades 7 and 8; computers optional
Materials	complete student books, teacher books with assessments and blackline masters, and a *Getting to Know CMP* book

Origin/Scope

The Connected Mathematics Project (CMP), headquartered at Michigan State University, was funded from 1991-1997 by the National Science Foundation. Project directors are Glenda Lappan, William Fitzgerald, and Elizabeth Phillips of Michigan State University; James Fey of the University of Maryland; and Susan Friel of the University of North Carolina. CMP is currently implemented in about 2,200 schools in all 50 states plus Washington, D.C., and Puerto Rico.

General Description

CMP is a mathematics curriculum for middle school students that is designed to foster knowledge and skill in using the vocabulary, forms of representation, materials, tools, techniques, and intellectual methods of the discipline of mathematics. CMP is intended to enable students to define and solve problems with reason, insight, inventiveness, and technical proficiency. The development of CMP has focused on the tight alignment of curriculum, instruction, and assessment. The overall project goal is to enable all students to reason and communicate proficiently in mathematics.

CMP development has been guided by five instructional themes:

- ***Mathematical Investigations:*** The curriculum is organized around "big ideas" in mathematics — clusters of important, related mathematical concepts, processes, ways of thinking, skills, and problem-solving strategies — that are studied in depth with the development of deep understanding as a goal.

- ***Reasoning:*** Students grow in their ability to reason effectively with information represented in pictorial, graphic, numeric, symbolic, and verbal forms, and to move flexibly among these representations.
- ***Teaching for Understanding:*** Instruction emphasizes inquiry and discovery of mathematical ideas through investigation of rich problem situations.
- ***Connections:*** The curriculum emphasizes significant connections among various mathematical topics and problems in other school subjects. The curriculum offers an opportunity to revisit and deepen understanding of ideas over time.
- ***Technology:*** Selection of mathematical goals and teaching approaches reflects the information processing capabilities of calculators and computers and the fundamental changes these tools are making in the way people learn and apply their knowledge.

During grades six through eight, CMP students develop knowledge and skill within five mathematical strands: number, geometry and measurement, probability, statistics, and algebra. Outcomes are specified for each of these areas by the end of eighth grade.

CMP is a problem-centered curriculum. It is organized into units that address mathematical ideas through a series of "investigations." Each investigation contains problems for teachers and students to explore. As students explore a series of connected problems, they develop deep understandings of important mathematical concepts embedded within the problems.

Results

The Iowa Test of Basic Skills math subtest and a standards-based problem-solving test were administered to CMP and non-CMP students in grades six, seven, and eight. On the problem-solving test, CMP students significantly outperformed non-CMP students. On the ITBS, CMP sixth and seventh graders performed as well as their non-CMP counterparts, and CMP eighth graders significantly outperformed those not in CMP. In a study of proportional reasoning, CMP students at all levels again significantly outperformed non-CMP students. CMP is currently gathering evidence of student achievement and/or teacher change from non-pilot locales. These locales are part of a three-year leadership training project.

Implementation

- ***Project Capacity:*** The national center for the CMP is in the Department of Mathematics at Michigan State University. CMP is also a satellite for the Show-Me Center, directed by Barbara Reys at the University of Missouri, which supports the dissemination and implementation of NSF-funded standards-based mathematics curricula. Both centers, together with the publisher, Dale Seymour (and Scott Foresman-Addison Wesley), can provide information about the project, including evaluation data and professional development activities.
- ***Faculty Buy-In***: There are no formal requirements or commitments on the part of the school or faculty. It is recommended that a district that is considering adopting CMP develop a long-term professional development plan to help teachers and administrators implement the curriculum.
- ***Initial Training***: National *Getting to Know CMP* workshops are provided in the summer for teachers and/or administrators who are considering or are about to implement the CMP curriculum in their schools.

- ***Follow-Up Coaching***: There is no required assistance during the first two or three years of implementation. A national CMP Users' Conference for teachers and/or administrators is conducted during the school year to discuss issues, implementation strategies, and successes for schools using the CMP curriculum. Also, CMP has developed a long-term professional development model that has been used in the pilot sites as well as with several NSF-funded leadership projects. Through these projects CMP has trained a number of teachers and curriculum coordinators who can provide implementation assistance to schools. CMP keeps a referral list of names that they can recommend to districts. Both the Show-Me Center and the publisher can also respond to requests for help in implementing the CMP curriculum.
- ***Networking***: In addition to an annual Users' Conference, CMP maintains a Web site and an e-mail address for questions and suggestions.
- ***Implementation Review***: Since CMP is now published commercially, there is no check on the extent nor completeness of CMP implementation.

Costs

The costs of buying the student and teacher editions of CMP are competitive with the costs of standard textbook materials.

Student Populations

CMP is implemented in regions across the U.S. including urban, suburban, and rural settings covering a wide socioeconomic spectrum. Settings range from largely white to predominately minority to mixed environments. Regular, special education, and gifted and talented students from both public and private schools participate.

Special Considerations

None.

Selected Evaluations

Developer

Ben-Chaim, D., Fey, J. T., Fitzgerald, W. M., Benedetto, C., & Miller, J. (1997). *A study of proportional reasoning among seventh and eighth grade students: A short report.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Outside Researchers

Hoover, M. N., Zawojewski, J. S., & Ridgeway, J. (1997). *Effects of the Connected Mathematics Project on student attainment.* Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Sample Sites

For information about schools using CMP and willing to share information, contact the Scott-Foresman sales representative in your region or the publisher, Dale Seymour.

For more information, contact:

Elizabeth Phillips
Connected Mathematics Project
A715 Wells Hall
Michigan State University
East Lansing, MI 48824
Phone: 517-432-2870
Fax: 517-432-2872
E-mail: cmp@math.msu.edu
Web site: www.mth.msu.edu/cmp

Show Me Center
104 Stewart Hall
University of Missouri
Columbia, MO 65211
Phone: 573-884-2099
Fax: 573-882-4481
E-mail: center@showme.missouri.edu
Website: http://showmecenter.missouri.edu

Cathy Anderson or Lorraine Groff
Dale Seymour Publications
10 Bank Street
White Plains, NY 10602
Anderson: Phone: 914-997-2192, ext. 5304
E-mail: cathya@awl.com
Groff: Phone: 914-997-2600, ext. 5315
E-mail: lorraineg@awl.com

Core-Plus Mathematics Project/ Contemporary Mathematics in Context* (9-12)

IN BRIEF Core-Plus Mathematics Project/ Contemporary Mathematics in Context	
Developer	Core-Plus Mathematics Project
Year Established	1992
# Schools Served (Jan. 1998)	103
Level	high school, accelerated 8th grade
Primary Goal	powerful mathematics for all students
Main Features	• integrated, connected strands • mathematical modeling and problem solving • core topics accessible to all students • collaborative group investigations • multi-dimensional assessment
Impact on Instruction	materials promote active learning, active teaching, and assessment; graphics calculators are used as tools for exploration
Impact on Organization/ Staffing	all teachers are encouraged to start teaching CPMP at Course 1 and move up a course each year
Impact on Schedule	• common planning periods for staff teaching same course (encouraged) • works well in block schedules and traditional two-semester schedules
Results	CPMP students have outperformed comparison groups on standardized tests of quantitative thinking and NAEP items; more students take more mathematics
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	encouraged early in adoption process
Technology	graphics calculators
Materials	calculator software, linkage strips for space-shape study, basic school supplies

Origin/Scope

Research and development for Contemporary Mathematics in Context (CMIC) was funded by a series of grants from the National Science Foundation to the Core-Plus Mathematics Project (CPMP), directed by Christian Hirsch of Western Michigan University, Arthur Coxford of the University of Michigan, James Fey of the University of Maryland, and Harold Schoen of the University of Iowa. Each course goes through a three-year research and development process. Courses 1 and 2 have been published by Everyday Learning Corporation, and Course 3 will be available in the summer of 1998. CMIC materials are currently being used in over 100 schools.

General Description

CMIC is a four-year integrated mathematical sciences curriculum for high schools: a three-year sequence for all students, plus a fourth-year course continuing the preparation of students for college mathematics. Its goal is to prepare students for success in college, careers, and daily life in contemporary society. CMIC content and pedagogy are based on the National Council of Teachers of Mathematics Standards. The curriculum builds on the theme of mathematics as sense-making. Through investigations of real-life contexts, students develop a rich understanding of important

* *Core-Plus Mathematics Project* is the name under which the curriculum was funded and developed, and *Contemporary Mathematics in Context* is the title given the curriculum by its publisher. The terms are used interchangeably.

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mathematics that makes sense to them and, in turn, enables them to make sense out of new situations and problems.

CMIC courses share the following mathematical and instructional features:

- ***Multiple connected strands:*** Each year of the curriculum features four strands — algebra and functions, statistics and probability, geometry and trigonometry, and discrete mathematics.
- ***Mathematical modeling:*** The curriculum emphasizes mathematical modeling, including data collection, representation, interpretation, prediction, and simulation.
- ***Access:*** The curriculum is designed so that topics are accessible to all students, with methods for accommodating differences in student performance.
- ***Graphics calculators:*** This technology allows for multiple representations — numerical, graphical, and symbolic — and a focus on goals in which mathematical thinking is central.
- ***Active learning:*** CMIC offers rich problem situations that involve students in investigating, conjecturing, verifying, applying, evaluating, and communicating mathematical ideas.
- ***Multi-dimensional assessment:*** Student progress is assessed through both curriculum-embedded and supplementary assessment procedures.

Results

Both CPMP Course 1 and Course 2 students in 33 schools in 11 states outperformed comparison students on the math subtest of the Iowa Tests of Educational Development. Compared to a nationally representative norm group, CPMP students also exhibited greater mathematical growth from the beginning of grade 9 to the ends of grades 9, 10 and 11. Course 3 students outperformed a representative sample of 12th graders on NAEP math assessments.

On project-developed post-tests focusing on algebraic and geometric skills, Course 1 and Course 2 students outperformed the comparison group on conceptual, application, and problem-solving tasks. On tasks assessing algebraic procedures, Course 1 students performed somewhat below the comparison group, but this difference had disappeared by the end of Course 2.

Implementation

- ***Project Capacity:*** Summer workshops for teachers are available for each course level at Western Michigan University (WMU) and at regional sites established by Everyday Learning Corporation.
- ***Faculty Buy-In:*** CMIC requirements for changes in content priorities and emphases, instructional materials, and assessment methods call for strong school and community commitment.
- ***Initial Training:*** Five-day summer workshops at WMU feature hands-on experience with curriculum materials and parent involvement strategies. Project staff and new CMIC teachers discuss initial implementation results at a two-day weekend session in November. Customized on-site workshops can be arranged through the Everyday Learning Corporation. CPMP also hosts a professional development institute for math

educators who provide professional development for districts implementing the CMIC curriculum.

- ***Follow-Up Coaching:*** Telephone consultation is provided to sites, most of which are in their first year, and participants are encouraged to attend the workshop for the next course. Many sites also receive support through local improvement initiatives.
- ***Networking:*** An annual conference brings participants together, and they also interact via e-mail. The publisher disseminates a newsletter called *Teacher Link*.
- ***Implementation Review:*** Field test sites and those involved in the project's longitudinal study are involved in implementation review with project staff.

Costs

For each of the two published courses, materials are $40 per student and $125 for teachers. Students need access to graphics calculators, and calculator software and software guide for each course costs $38. Programs may be downloaded to all student calculators, but the first download is from a computer utilizing a Linking connector.

In addition to transportation to Kalamazoo, Michigan, for training, each teacher's participation will cost $485 for a five-day workshop (including activities, materials, and lunches). Housing is available in dormitories as well as local motels. Regional training offered by Everyday Learning Corporation costs $285 per participant for a three-day workshop and materials, plus transportation and housing. Many districts arrange for consultants to provide in-house professional development; experienced CPMP teachers available to conduct workshops can be reached through CPMP or Everyday Learning.

Student Populations

CMIC is now being used in schools in at least 22 states — schools that vary from urban to suburban to rural, from affluent to blue-collar to low-income/high unemployment, and from white- or Hispanic-majority to 40% African-American.

Special Considerations

Effective implementation requires study and planning time and provision for early involvement of all stakeholders. Contact the developer for recommended practices regarding stakeholder involvement, professional development, alternative assessments, technology, student placement, student grouping, and scheduling.

Selected Evaluations

Developer

Schoen, H. L., & Ziebarth, S. W. (1998). *Assessments of students' mathematical performance*. Iowa City: University of Iowa, Core-Plus Mathematics Project Evaluation Center.

Schoen, H. L., & Ziebarth, S. W. (1998). *Mathematical achievement on standardized tests*. Iowa City: University of Iowa, Core-Plus Mathematics Project Evaluation Center.

Outside Researchers

None available.

Sample Sites

Carlsbad High School
3557 Monroe Street
Carlsbad, CA 92008
760-434-1726
Contact: Cathy Williams

Sweetwater High School
2900 Highland Avenue
National City, CA 91950
619-691-5730
Contact: Bill Bokesch

Sitka High School
100 Lake Street
Sitka, AK 99835
907-747-3263
Contact: Cheryl Bach

For more information, contact:

Marcia Weller Weinhold, Outreach Coordinator
Core-Plus Mathematics Project
4408 Everett Tower
Western Michigan University
Kalamazoo, MI 49008
Phone: 616-387-4562
Fax: 616-387-4546
E-mail: cpmp@wmich.edu
Web site: http://www.wmich.edu/math-stat/cpmp

Interactive Mathematics Program (9-12)

IN BRIEF Interactive Mathematics Program	
Developer	Diane Resek and Dan Fendel (San Francisco State University); Sherry Fraser and Lynne Alper (University of California, Berkeley)
Year Established	1989
# Schools Served (Jan. 1998)	243
Level	9-12
Primary Goal	to make higher level mathematics accessible to more kinds of students
Main Features	• integrated core curriculum that replaces the traditional mathematics sequence • focus on developing student understanding
Impact on Instruction	hands-on experiences; open-ended projects; cooperative learning; written and oral communication emphasized; manipulatives, models, and graphing calculators
Impact on Organization/ Staffing	starts with at least two teachers who must share planning time
Impact on Schedule	none
Results	SAT scores comparable to those of traditional students; high scores in probability, statistics, problem-solving, and quantitative reasoning; higher overall GPAs and more math taken
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	many assignments require family involvement
Technology	daily use of graphing calculators
Materials	textbooks, teacher resource materials, manipulatives

Origin/Scope

The Interactive Mathematics Program (IMP) began in 1989. Directed by Diane Resek and Dan Fendel, mathematics professors at San Francisco State University, along with Sherry Fraser and Lynne Alper, mathematics teachers at the University of California, Berkeley, the program was originally piloted in three schools in California. It has since expanded to 243 schools across 21 states, and is currently being implemented in French-speaking Canada.

General Description

IMP is a four-year high school core mathematics curriculum intended to replace the traditional Algebra 1 → Geometry → Algebra 2 → Trig/PreCalculus sequence. It consists of 20 units, 5 per year, which are integrated and problem-centered. The content goes beyond what is traditionally taught in high school mathematics by offering units covering probability, statistics, discrete mathematics, and matrix algebra. It focuses on developing student understanding by using investigations, hands-on experiences, group learning, and open-ended projects. The idea is to make high-level mathematics more accessible to students with varied backgrounds and abilities. Other important features of the program include an emphasis on written and oral communication, daily use of graphing calculators, and a wide variety of assessment tools.

Results

As part of its 1992-97 grant from the National Science Foundation, IMP is undergoing a five year evaluation conducted by the Wisconsin Center for Educational Research. The Center is analyzing data for IMP and non-IMP students at three sites across

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the country, looking at variables such as number and kinds of mathematics courses taken, standardized test scores, and grade point averages. The results, thus far, have shown that IMP students score as well as or better than traditional math students on the SAT, even though IMP students spend 20% less time on the topics covered on that test. IMP students outscore their traditional counterparts when it comes to probability, statistics, problem solving, and quantitative reasoning. There is also evidence to show that IMP students take more math and have higher overall grade point averages.

Implementation

- ***Project Capacity:*** The program is coordinated by a main implementation center in California and supported by regional centers in Arizona, California, Colorado, Hawaii, Illinois, Massachusetts, Minnesota, New York, Oregon, Pennsylvania, Nova Scotia, and New Brunswick.
- ***Faculty Buy-In:*** Normally, at least two math teachers work together to begin implementing IMP. It is suggested that at least 50% of the math teachers in the department be supportive of the program. New teachers are added each year as the school moves to the next level of IMP.
- ***Initial Training:*** Training varies with each regional center. Generally, five days of up-front summer training are required to begin each level of IMP.
- ***Follow-Up Coaching:*** Three to five days of follow-up training are offered mid-year. Many of the regional centers have funding and staff to provide regular classroom visits, observations, and support to IMP teachers and school sites.
- ***Networking:*** Every regional center has its own networking structure. At the national level, there is an IMP newsletter called *IMPressions,* a Web site, and an IMP Listserv.
- ***Implementation Review:*** When IMP first made its way into schools across the country, the founding directors and teacher leaders made trips to new school sites to support teachers and staff with implementation. That role is now taken over by the regional centers, their directors, and their support staff.

Costs

Costs vary from regional center to regional center and from school to school, depending on resources available. Teacher training is estimated at $500 per teacher for five days of summer training (not including room, board or travel expenses); $200 per teacher for winter training; and any substitute costs associated with winter training. Required materials include class sets of graphing calculators (TI-82 or TI-83 at approximately $90 apiece); student texts (approximately $36 apiece); and teacher resource materials (free with an order of 25 texts.) Additionally, various manipulatives and classroom supplies are needed. The total cost to outfit an IMP classroom is estimated at $500-$1,000, depending on what is already available. In terms of staff support, IMP teachers require regular professional collaboration time with their partner teacher. This ranges from extra prep periods to stipends for weekly meetings.

Student Populations

IMP has been implemented in a wide variety of schools with diverse student populations ranging from academic magnet schools to general comprehensive high schools to urban schools with high proportions of minority students, second-language students, and below-grade-level students. IMP has been translated and is available in Spanish, French, and one native Hawaiian language.

Special Considerations

This program is very different from what most people remember of their high school math experience. As a result, there must be a concerted effort to educate and gain the support of administrators, counselors, parents, and community members. In addition, teachers of IMP are asked to drastically change their teaching practices, their role, and perhaps their view of mathematics and what students are capable of doing.

Selected Evaluations

Developer

Alper, L., Fendel, D., Fraser, S., & Resek, D. (1995). Implementing the professional standards for teaching mathematics: What is it worth? *The Mathematics Teacher, 88*(7), 598-602.

Outside Researchers

Webb, N. (1996-97). Mathematics curriculum boosts performance. *Wisconsin Center for Education Research Highlights, 8*(4).

Sample Sites

Grant High School
2245 NE 36th Avenue
Portland, OR 97212
503-916-4665
Contact: Sue Yabuki

Eaglecrest High School
5100 South Picadilly Street
Aurora, CO 80015
303-751-0895
Contact: Jean Klanica

Strawberry Mansion
32nd & Ridge
Philadelphia, PA 19121
215-951-1203
Contact: Joe Merlino

For more information, contact:

Janice Bussey
IMP Outreach Coordinator
2420 Van Layden Way
Modesto, CA 95356
Phone: 888-628-4467
Fax: 209-575-2750
E-mail: jbimp@telis.org

MATH *Connections*: A Secondary Mathematics Core Curriculum™ (9-12)

IN BRIEF MATH *Connections*	
Developer	Connecticut Business and Industry Association
Year Established	1992
# Schools Served (Jan. 1998)	21
Level	9-12
Primary Goal	to provide a core curriculum that opens the concepts of higher mathematics to all students
Main Features	• 3-year core curriculum • thematic, concept-driven approach • integrates higher mathematics concepts • emphasizes connections between mathematics and other disciplines and between mathematics and the real world
Results	students who use the curriculum have outperformed control groups on standardized tests
Impact on Instruction	requires graphing calculators
Impact on Organization/ Staffing	must be implemented with at least two teachers working and planning together
Impact on Schedule	none
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	school districts are encouraged to introduce MATH *Connections* to parents at meetings facilitated by program facilitators
Technology	graphing calculators for students; one TI view screen master calculator
Materials	textbooks, teacher resources, blackline masters, and assessments

Origin/Scope

MATH *Connections* is a project undertaken with a five-year $4.1 million National Science Foundation grant awarded in 1992 to the Connecticut Business and Industry Association (CBIA) Education Foundation. MATH *Connections* now has 21 schools in three states (Connecticut, Maine, and Rhode Island).

General Description

The overall mission of MATH *Connections* was to develop a core curriculum for grades 9-12 that opens the concepts of higher mathematics to all students and inspires new interest and excitement in mathematics for both students and faculty. MATH *Connections* was created by a diverse team of curriculum developers: mathematicians; scientists; educators in the fields of math, science, and technology; and business people.

MATH *Connections* is a three-year core curriculum, usually used in grades 9-11 or 10-12. The curriculum integrates the concepts of higher mathematics — such as algebra, geometry, probability, statistics and trigonometry — into a package that is interesting for all students. The project uses the National Council of Teachers of Mathematics (NCTM) standards as a guide for student performance, teacher professional development, and alternative student assessment. Technology is integrated into the curriculum with graphing calculators and computers, which students use to investigate concepts in greater depth and breadth, make conjectures, and validate findings.

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MATH *Connections* uses a common thematic thread that blends many mathematical topics that traditionally have been taught separately to emphasize the interconnectedness among mathematical ideas. The project is built around connections, including those between mathematics and the real world of people, business, and everyday life; between mathematics and science; and between mathematics and other subjects such as history, geography and language arts. The project focuses on four aspects of mathematics: (1) mathematics as problem-solving, (2) mathematics as communication, (3) mathematics as reasoning, and (4) mathematics as making connections.

Each of the three years of the program is built around a general theme that serves as a thread for the topics covered. The three themes are Data, Numbers, and Patterns; Shapes in Space; and Mathematical Models. MATH *Connections* is divided into a series of six half-year-long textbooks. The 100+ assessments built into the curriculum include written, oral, and demonstration formats. In addition to assessing students' ability to perform standard procedures, such as solving equations, the assessments also measure students' approach to non-routine problems taken from the real world and their understanding of mathematics concepts and how they relate to each other.

Results

The first group of five schools field testing MATH *Connections* indicate increased student achievement and an increased positive attitude towards mathematics. One study compared two classes of students in a suburban high school whose mean test scores in eighth grade were essentially equivalent. By the end of tenth grade, MATH *Connections* students were found to have significantly higher scores. Another external evaluator found that 53% of MATH *Connections* students met or exceeded the state goal of 266 on the Connecticut Academic Performance Test, while 43% of non-MATH *Connections* students met the same goal. In a third study, MATH *Connections* was found to have a positive effect on students' confidence levels in learning mathematics and on their perceptions of its usefulness.

Implementation

- ***Project Capacity:*** MATH *Connection's* publisher, IT'S ABOUT TIME, is augmenting the present staff with a national corps of professional educators, trained by MATH *Connections* staff. They also are working with universities around the country to set up regional centers for teacher training in Leadership Institutes. These regional centers will be at teaching universities, working in conjunction with MATH *Connections* staff.
- ***Faculty Buy-in:*** During the field testing stage, MATH *Connections* has required buy-in from the superintendent, principal, and math chair. They also require a minimum of two teachers teaching two classes and having the same planning period. While they can work with more than two teachers per school, two is the minimum for the program to be successful.
- ***Initial Training:*** MATH *Connections* holds Summer Leadership Institutes, as well as institutes throughout the year, for teachers and administrators in schools adopting the MATH *Connections* curriculum.

- ***Follow-up Coaching:*** Follow-Up Academic Leadership Institutes are held on designated Saturdays throughout the school year to ensure that teachers receive instructors' support and opportunities to share their experiences with the curriculum. Regional centers also will provide support on an as-needed basis.
- ***Networking:*** A newsletter keeps administrators, teachers, and business partners apprised of events related to the project. All project teachers have access to the electronic communications network housed at the Talcott Mountain Science Center in Hartford, Connecticut. E-mail, telephone, and an Internet Web site provide additional support by MATH *Connections* staff and provide for teacher-teacher interaction.
- ***Implementation Review:*** Site visits are conducted on a regular basis by MATH *Connections* staff and master instructors.

Costs

Textbooks cost $36.95 per student, plus $59.95 for the Teachers' Resource package, which includes Teachers' Edition, teacher commentary (which provides professional development on mathematics), black-line masters, and the assessments. Additional costs include one classroom set of graphing calculators (approximately $69-$89 per student), one TI view screen master calculator (approximately $300 per classroom), and one overhead projector (approximately $150 per classroom). There may be a cost (shared with the publisher) for professional development, depending on the number of teachers and administrators participating.

Student Populations

MATH *Connections* serves a diverse population, having been field-tested in inner-city, urban, suburban, and rural school districts with African-American, Hispanic, and Caucasian students. Year I of the curriculum has served eighth grade honor students who then continue the program in high school. The program also has served students for whom English is a second language; special education students who have been mainstreamed; and, in one school, special education students in a self-contained class.

Special Considerations

The developers suggest that teachers and students have access to computers, e-mail, and the Internet.

Selected Evaluations

Developer
None available.

Outside Researchers
Leinwand, S. (1996, July 6). Capturing and sharing success stories. *NCSM Newsletter, 25*(4).

Sample Sites

Cheshire High School
525 South Main Street
Cheshire, CT 06410
203-250-2536
Mathematics Department
Chair: Pauline Alim

Coginchaug Regional High School
135 Pickett Lane
Durham, CT 06422
860-349-7215
Mathematics Department
Chair: John DeMeo

Manchester High School
135 Middle Turnpike East
Manchester, CT 06040
860-647-3516
Mathematics Department
Chair: Larry Olsen

For more information, contact:

June G. Ellis
MATH *Connections:* A Secondary Mathematics Core Curriculum™
31 Woodland Street, Suite 9R
Hartford, CT 06105
Phone: 860-244-1900
Fax: unavailable
E-mail: mathconx@aol.com
Website: http: www.mathconnections.com

University of Chicago School Mathematics Project (K-12)

IN BRIEF University of Chicago School Mathematics Project	
Developer	University of Chicago School Mathematics Project
Year Established	1983
# Schools Served (Jan. 1998)	approximately 4 million students
Level	K-12
Primary Goal	to improve the performance and participation levels of the vast majority of students K-12
Main Features	• K-12 mathematics curriculum • use of applications, readings, problem solving, and technology to lay groundwork for depth and breadth of mathematics understanding
Results	K-6 students do as well on computation and better in areas such as data and fractions; secondary students score as well on traditional tests and higher on problem solving and applications
Impact on Instruction	prescribed curriculum
Impact on Organization/ Staffing	none
Impact on Schedule	none
Students Served	
Title I	no
English-language learners	no
Urban	yes
Rural	yes
Parental Involvement	Home Links: materials for parents of elementary students that promote review and enrichment
Technology	calculators or graphing calculators (depending on the grade) and/or computers must be available for students' use
Materials	wide range of materials for grades K-12

Origin/Scope

The University of Chicago School Mathematics Project, founded in 1983 by an organization of the same name, offers a complete mathematics curriculum and materials for teachers for grades K-12. It is now being used by approximately four million students throughout the 50 states, Puerto Rico, and abroad.

General Description

The University of Chicago School Mathematics Project (UCSMP) seeks to improve mathematics education for the vast majority of students in grades K-12. The project began by researching the teaching of mathematics through real life applications, including the examination of mathematics curricula taught in other countries. UCSMP has gone on to develop innovative materials for the teaching of mathematics as well as teacher training programs. It continues to engage in extensive evaluations of its own work. UCSMP develops its materials with several key goals in mind: to update mathematics curricula, to upgrade student achievement, and to increase the number of students continuing their mathematics education beyond algebra and geometry.

The project has three major components: elementary, secondary, and resource development. UCSMP materials, including textbooks, teacher resource kits, and workbooks, are published by the Everyday Learning Corporation and Scott Foresman-Addison Wesley. Translations of foreign textbooks and evaluation reports are published by the project, by the National Council of Teachers of Mathematics (NCTM), and by the American Mathematical Society.

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UCSMP's K-6 curriculum helps children make the transition from intuition and concrete operations to abstractions and symbol processing skills. In the early stages of this curriculum, the program emphasizes playful, verbal interactions and manipulative activities. This helps create a mathematics-rich atmosphere in the classroom and helps lay the groundwork for a greater breadth and depth of mathematical understanding. The curriculum in UCSMP's secondary texts (grades 6-12) stresses the use of applications, readings, problem solving, and technology. Both the elementary and secondary components of UCSMP actively involve teachers in the writing of their materials.

Results

Results from studies on grades K-6 (Everyday Mathematics) show that students do as well on computation and much better in areas traditionally underrepresented in the elementary school curriculum, such as mental computation, geometry, data and graphing, and fractions. Study teachers report that students are much better at reasoning, problem solving, and communication, and show a better mathematical understanding than students of previous years. Teachers also rate the curriculum highly on meeting the goals of the NCTM standards. Individual results are available for each of the six UCSMP secondary courses. In general the results show that compared to non-UCSMP students, UCSMP students score as well on traditional tests and quite a bit higher on problem solving and applications tests.

Implementation

- ***Project Capacity:*** National center located at University of Chicago; the project has unlimited capacity.
- ***Faculty Buy-In:*** There are no requirements for formal or informal commitment on the part of school faculty. However, because UCSMP materials are not like traditional materials, it is important for school districts to provide sufficient inservice training on the newer ideas incorporated in them.
- ***Initial Training:*** For the elementary materials, inservice conferences for new and experienced users of the materials are held in locations throughout the country at various times during the year. For the secondary materials, there is a conference each autumn which is open to all and a conference each August which is open to users of the materials in the upcoming year. Upon adoption, an initial inservice meeting in the adopting district, staffed by trained UCSMP consultants, may be arranged through the publishers of the project's materials (Scott Foresman-Addison Wesley and the Everyday Learning Corporation).
- ***Follow-up Coaching:*** Follow-up meetings can be scheduled when necessary based on consultant availability.
- ***Networking:*** Annual project brochure, newsletter twice a year, and conferences; Internet discussion groups and Web site under development.
- ***Implementation Review:*** Teachers work closely with UCSMP staff, attend training and review meetings, submit lesson plans for review, communicate by telephone and e-mail, and allow UCSMP staff to observe classes, discuss difficulties, and interview and test students.

Costs

The costs for adopting a UCSMP course are comparable to the costs of purchasing textbooks and other teacher resource materials from a major publisher. Contact the developer for actual costs.

Student Populations

The UCSMP has been used in rural, urban, and suburban communities and has served students of various races, ethnic backgrounds, and income levels.

Special Considerations

None.

Selected Evaluations

Developer

(The following evaluations, among others, are available from the UCSMP)

Formative evaluation of kindergarten Everyday Mathematics (1986-87).

Teaching and learning algebra: An evaluation of UCSMP algebra (1988-89).

A field test of fourth grade Everyday Mathematics (1993-94).

Third grade Everyday Mathematics students' performance on the 1993 and 1994 Illinois State Mathematics Test (1994-95).

A follow-up to the fifth grade field test of Everyday Mathematics: Geometry and mental and written computation (1995-96).

Outside Researchers

None available.

Sample Sites

UCSMP has hundreds of sites all over the country. It tries to match site locations with the specific needs of the teacher or school inquiring about the project.

For more information, contact:

Carol Siegel
UCSMP
University of Chicago
5835 South Kimbark
Chicago, IL 60637
Phone: 773-702-1130
Fax: 773-702-0248
e-mail: ucsmp@cicero.uchicago.edu

Science Models

Developmental Approaches in Science, Health and Technology (DASH): K-6

IN BRIEF Developmental Approaches in Science, Health and Technology (DASH)	
Developer	Curriculum Research & Development Group, University of Hawaii at Manoa
Year Established	1987
# Schools Served (Jan. 1998)	2,375
Level	K-6
Primary Goal	engage all students in learning about science by bringing the working worlds of scientists and technologists into the classroom
Main Features	• constructivist, inquiry-based approach • students generate products for each lesson that go into portfolio • integrated science curriculum grouped around themes • continual assessment including student self-assessment
Results	4-year study showed improved student achievement in understanding important concepts and skills; improved ability to integrate and apply learning; proficiency in investigative skills
Impact on Instruction	use of effective inquiry teaching skills; integrating assessment with instruction
Impact on Organization/ Staffing	local coordinator required on district or school level
Impact on Schedule	none
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	family component stresses relevance of material; newsletter suggests ways parents can reinforce student learning
Technology	no new technology required
Materials	teachers and administrator guides; classroom materials; extensive listing of trade books that support the material

Origin/Scope

DASH was created by the University of Hawaii Curriculum Research and Development Group in collaboration with a consortium of universities and associated school districts across the country. DASH began in 1987 and currently is used by 2,375 schools in 26 states.

General Description

DASH provides a comprehensive, integrated, inquiry-based program in science, health, and technology for grades K-6. Students with a wide range of backgrounds, learning styles, and abilities learn concepts and skills through authentic technological and scientific exploration, invention, and explanation. The sequential, spiral curriculum reflects both children's acquisition of concepts about how the world operates and the historical development of the sciences. DASH also connects school studies to the world of daily living, reinforcing lessons and allowing students to apply what they learn.

DASH students are technologists and scientists working with and making sense out of natural and, eventually, experimental phenomena. Seventy-five to 80% of student time is involved in hands-on activity, with the remainder spent reflecting, recording, and reporting. Over 650 interconnected activities progressively support students' construction of the basic concepts and skills of science, health, and technology. For instance, studies in the science

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component for grades K-3 engage students in observing, categorizing, and generalizing about the natural world (weather, plants, animals, and astronomy). From grade 4 on, students meet anomalies that stimulate them to experiment, create research designs, and test their own hypotheses.

The program is organized thematically at each grade level into 10 clusters, such as Food and Nutrition, Energy and Communication, and Matter, Space and Construction. Assessment is built into each lesson, is shared between teacher and student to develop self-assessment capacity, and includes student-generated products that go into student portfolios. The use of student research teams fosters collaborative learning. Science kits are not used; instead, students make much of their own equipment through readily available and recyclable materials, reducing costs and increasing students' sense that science learning is accessible.

DASH addresses the standards and goals for science education set by the National Research Council, the American Association for the Advancement of Science, and the National Center for Improving Science Education.

Results

A four-year study showed that DASH students improved achievement in a number of areas, including knowledge and understanding of important concepts and skills in science, health and technology, and the ability to integrate and apply their learning to other content areas and their own lives. DASH students also demonstrated proficiency in investigative skills, taking and sharing responsibility for their own learning and classroom operations, and using cooperative learning strategies when appropriate. DASH teachers changed their attitude and approaches toward elementary science in ways that resulted in increased emphasis on science and improved focus on student learning.

Implementation

- ***Project Capacity:*** Fourteen universities across the U.S. provide a range of services for DASH teachers. They are supplemented by a nationwide cadre of certified DASH trainers. In addition, the local education agency for schools implementing DASH designates a local coordinator, who receives additional instruction to become the in-house advocate for standards-based science reform.
- ***Faculty Buy-In:*** Teacher training is preceded by outreach with school personnel and a commitment-building process that includes site visits, presentations on standards- and research-based curriculum and methodology, data gathering, and detailed suggestions for implementing DASH at the site. No formal buy-in is required.
- ***Initial Training:*** The Curriculum Research and Development Group (CRDG) requires teachers to participate in a 10-day, 70-hour institute prior to implementing DASH. Teachers go through the entire program at the grade level they intend to teach. The program also assists administrators in implementing DASH through workshops, consultations, and an administrators' guide.
- ***Follow-Up Coaching:*** CRDG offers an extensive program of follow-up services for teachers. The local coordinator, with support from CRDG, provides frequent classroom coaching and science team meetings the first year. Long-term institutionalization includes professional development seminars, network support, and a teacher-as-researcher component, in which teachers collect, analyze, and publish findings on classroom activities leading to student improvement.

- ***Networking:*** CDRG provides ongoing professional development support through a toll-free phone number and the Internet (electronic newsletters, e-mail questions and answers, a Web site). Teacher institutes include mastery of these networking skills as a key feature for ongoing professional development.
- ***Implementation Review:*** The local coordinator, with support from CRDG, monitors implementation progress through observation, discussion, and teacher surveys. The local coordinator uses the data to make adjustments, provide support, and give feedback for ongoing improvement.

Costs

The costs of initial teacher training and classroom materials are $775 per teacher, with a 20-teacher minimum (costs for less than 20 teachers are negotiated). Costs for supplemental story books are as follows: primary grades, $342 for a set of 20; grade 4, $60 for 15; and grade 5, $360 for 60. No special equipment is required; the start-up cost for local purchase items is approximately $200 per class, with subsequent annual replacement averaging $100. A two-year support program that includes videos and syllabi for monthly meetings is $100 per teacher. Additional costs are teacher time for training and the allocation of a local coordinator (often districtwide).

Student Populations

DASH is designed for heterogeneous student groups, consistent with the program's philosophy that science should be accessible for all and that technology and science have been built by people of vastly diverse talents. DASH has been used successfully by a wide spectrum of students.

Special Considerations

There are many home extensions of in-class work, including research and parent contact to expand the experience of the classroom. The program offers a parent newsletter to communicate with parents what is happening in school.

Selected Evaluations

Developer

Curriculum Research and Development Group. (1993). *Developmental Approaches in Science, Health and Technology (DASH): A report of seven case studies assessing the effects of students and teachers.* Honolulu: University of Hawaii.

Outside Researchers

None available.

Sample Sites

Weaverville Elementary
P.O. Box 1000
Weaverville, CA 96093
916-623-5533
Contact: Susan Odell

Helen Keller School
7846 West 163rd Street
Tinley Park, IL 60477
708-532-2144
Contact: Carol Kassanitz

Center Elementary School
201 Center-New Texas Road
Pittsburgh, PA 15239
412-795-4420
Contact: Judith Mahoney

For more information, contact:

Donald B. Young
Associate Director
Curriculum Research and Development Group
University of Hawaii at Manoa
1776 University Avenue
Honolulu, HI 96822
Phone: 800-799-8111
E-mail: young@hawaii.edu
Web site: http://www2.hawaii.edu/crdg/science/dash/dash.html

Foundational Approaches in Science Teaching (FAST) (Middle School)

IN BRIEF Foundational Approaches in Science Teaching (FAST)	
Developer	Curriculum Research & Development Group, University of Hawaii at Manoa
Year Established	1971
# Schools Served (Jan. 1998)	3,800
Level	middle school
Primary Goal	prepare scientifically literate students who can participate in the transactions of a science- and technology-based society
Main Features	• inquiry-based curriculum • student-designed projects • course material designed for wide spectrum of ability levels • strategies for multi-dimensional assessment
Results	significantly higher science achievement (CTBS and CAT), performance on basic thinking and problem-solving skills (CTBS), and gains in manipulative laboratory skills
Impact on Instruction	standards-based approach to content; use of constructivist theory and a broad array of instructional strategies
Impact on Organization/ Staffing	local coordinator required on district or school level
Impact on Schedule	classes require minimum of 45 minutes
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	no specific components
Technology	no new technology required
Materials	teacher, instructional, and evaluation guides; sets of classroom materials

Origin/Scope

Since 1971, over three million students have taken one or more years of the FAST program. Currently 3,800 schools in 36 states use FAST, which is also taught in 10 foreign countries. FAST was created in 1967 by the Curriculum Research and Development Group of the University of Hawaii.

General Description

The Foundational Approaches in Science Teaching (FAST) program is a sequence of three inquiry science courses especially designed for middle-school students. The courses emphasize the foundational concepts and methods of the physical, biological, and earth sciences. Student investigations are organized into three strands called physical science, ecology, and "relational study," which integrates the study of science, technology, and society. The goal of FAST is to develop scientifically literate students who have both the background necessary for understanding environmental concerns in our technological society and basic tools for further study in science. The main objectives are to develop relevant thinking skills, laboratory skills, and knowledge of core science concepts.

FAST students develop a scientific world view by doing science — generating questions, designing and carrying out experiments, collecting and analyzing data, researching, drawing conclusions based on evidence, writing reports, and communicating findings. Students work in small collaborative groups that function as research teams,

becoming producers rather than only receivers of information. The teacher is the research director and coordinator, a colleague who stimulates and facilitates ever deeper probing into problems. Through the process of inquiry and research, student teams generate the theoretical content of the program.

As scientists, students design many of their own experiments. In a physics unit, for example, students formulate theoretical models of heat and light and test their models. They also invent and build tools and instruments for some investigations. As technologists, students apply recently mastered scientific principles, such as the concepts of buoyancy and density in designing and constructing a working model of a submarine. By experiencing multiple roles (scientist, engineer, technologist, politician, and citizen), students practice and reinforce skills from many areas, including math, written and oral communications, and social studies.

FAST meets the standards and goals for science education set by the National Research Council, the American Association for the Advancement of Science, and the National Center for Improving Science Education.

Results

In several impact evaluation studies, FAST students have outperformed non-FAST students in a number of areas. FAST students have demonstrated significantly higher science achievement on CTBS and the California Achievement Test, significantly higher performance on basic thinking and problem-solving skills (CTBS), significantly higher gains in manipulative laboratory skills (Laboratory Skills Test), and significantly higher creative thinking skills (Torrance Tests of Creative Thinking). Results were consistent for all FAST students, regardless of gender, learning style differences and ability. A 1977 comparison study on the program's long-range effects showed FAST students with higher achievement in biology, greater interest in science, and higher preference for inquiry-oriented study using critical questioning. Also, FAST was designated by the Educational Testing Service as one of two programs nationwide with the best comprehensive middle-school science curricula.

Implementation

- ***Project Capacity:*** Fourteen universities across the U.S. provide a range of services for FAST teachers. They are supplemented by a nationwide cadre of certified FAST trainers. In addition, the local education agency for schools implementing FAST designates a local coordinator, who receives additional instruction to become the in-house advocate for standards-based science reform.
- ***Faculty Buy-In:*** Teacher training is preceded by outreach with school personnel and a commitment-building process that includes site visits, presentations on standards- and research-based curriculum and methodology, data gathering and detailed suggestions for implementing FAST at the site. No formal buy-in is required.
- ***Initial Training:*** The Curriculum Research and Development Group (CRDG) requires teachers implementing FAST to participate in a 10-day, 70-hour institute prior to teaching FAST. Participants receive a variety of instructional materials, including three guides (teacher, instructional and evaluation), student books and reference books.

- ***Follow-Up Coaching:*** CRDG offers an extensive program of follow-up services for teachers to ensure successful implementation. The local coordinator, with support from CRDG, provides frequent classroom coaching and science team meetings the first year. Long-term institutionalization includes professional development seminars, network support, and a teacher-as-researcher component, in which teachers collect, analyze and publish findings on classroom activities leading to student improvement.
- ***Networking:*** CDRG provides ongoing professional development support through a toll-free phone number and the Internet (electronic newsletters, Web site, e-mail questions and answers, etc.). Teacher institutes include mastery of these networking skills as a key feature for ongoing professional development.
- ***Implementation Review:*** The local coordinator, with support from CRDG, monitors implementation progress through observation, discussion, and teacher surveys. The local coordinator uses the data to diagnose the necessary adjustments, provide support as appropriate, and give feedback into the planning process for ongoing improvement.

Costs

A 10-day teacher institute (20-teacher minimum) is required for each of the FAST courses: FAST 1 (The Local Environment); FAST 2 (Matter and Energy in the Biosphere); and FAST 3 (Change over Time). Institute fees are $600-$625 per participant. A one-year support program of monthly meetings, which costs $100 per teacher, is recommended. Classroom sets of student materials required for implementation are approximately $1,200 for a set of 30 and can be shared by multiple classes. FAST 1 and 2 require an equipment building kit ($175-$255), and yearly equipment replacement costs are between $100-$200 per classroom. Additional costs are teacher time for training and the allocation of a local coordinator (often districtwide).

Student Populations

FAST is designed as a science program for students in heterogeneous, untracked classes. The Educational Testing Service identified FAST as an exemplary program serving minority and female populations during the middle-school years. Separate studies have shown the effectiveness of FAST in teaching gifted and mildly disabled students as well.

Special Considerations

FAST incorporates a wide variety of instructional strategies designed to address the different learning styles and developmental needs of students ages 12-15. Some of the instructional strategies appropriate for student investigations are cooperative/collaborative learning, whole group instruction, independent and self-directed learning, peer coaching, graphing, concept mapping, self-assessment, research, and simulations.

Selected Evaluations

Developer

FAST Project (1996). *A Summary of evaluations.* Honolulu: University of Hawaii, Curriculum Research & Development Group.

Outside Researchers

Clewell, B. C., Thorpe, M. E., & Anderson, B. T. (1987). *Intervention programs in math, science, and computer science for minority and female students in grades four through eight.* Princeton, NJ: Educational Testing Service.

Dekkers, J. (1978). The effect of the junior high FAST program on student achievement and preferences in high school biology. *Studies in Educational Evaluation, 3*(1), 1-17.

Mattheis, F. E., & Nakayama, G. (1988). *Effects of a laboratory-centered inquiry program on laboratory skills, science process skills, and understanding of science knowledge in middle grades students.* Greenville, NC: East Carolina University.

Tamir, P., & Yamamoto, K. (1978). The effects of junior inquiry science programs on student cognitive and activity preferences in science. *Research in Science Education, 8,* 71-78.

Sample Sites

Mt. Olive Middle School
309 Wooten Street
Mt. Olive, NC 28365
919-658-7320
Contact: David Johnson

Andrew Hill High School
3200 Senter Road
San Jose, CA 95111
408-227-8800
Contact: Gene Gallock

James Hart Junior High School
18211 Aberdeen Street
Homewood, IL 60430
708-799-5544
Contact: Jim Pudlewski

For more information, contact:

Donald Young
Associate Director
Curriculum Research and Development Group
University of Hawaii at Manoa
1776 University Avenue
Honolulu, HI 96822
Phone: 800-799-8111
E-mail: young@hawaii.edu
Web site: http://www2.hawaii.edu/crdg/science/fast/FAST.html

GALAXY Classroom Science (K-5)

IN BRIEF GALAXY Classroom Science	
Developer	EMG GALAXY Classroom
Year Established	1993
# Schools Served (Jan. 1998)	600+
Level	K-5
Primary Goal	improve science learning by all students through inquiry-based, "hands-on/minds-on" authentic curriculum
Main Features	• global interactive network of elementary schools linked by satellite, fax, and Internet • 15-minute video broadcasts • three one-year, theme-based science curricula • a one-year language arts curriculum
Impact on Instruction	teachers use technology, curriculum, and materials to engage students as scientists exploring phenomena, developing scientific thinking processes, and communicating findings
Impact on Organization/ Staffing	none
Impact on Schedule	schedule must accommodate satellite broadcasts
Results	student achievement in core science concepts and thinking processes improved compared to non-GALAXY group
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	curriculum includes regular take-home component that teachers may use
Technology	satellite broadcast network, interactive audio conferencing telephone and fax technology
Materials	teachers' guide; student print materials, including bulletin featuring student input; science kits for hands-on investigations; bibliography of children's science literature

Origin/Scope

The GALAXY Classroom grew out of a 1990 initiative by GM Hughes Electronics, with later funding from the National Science Foundation, to create resources that would help teachers significantly improve learning in America's elementary schools. The effort combined an extensive array of telecommunications resources with many "best practices" in teaching and learning, including hands-on investigations using GEMS (Great Explorations in Math and Science) and FOSS (Full Option Science System) units originally developed at the Lawrence Hall of Science at the University of California, Berkeley.

In 1993-94, GALAXY Classroom began demonstration projects in 40 schools. As of January 1998, 600 schools nationwide are part of the GALAXY Classroom, with an additional 40 schools in Canada and two in Mexico.

General Description

The GALAXY Classroom is an inquiry-based, student-centered curriculum and instructional approach supported by a global interactive network of elementary schools, which are linked by satellite and computer technologies. GALAXY Classroom Science curricula consist of three one-year units: Fixer Uppers for grades 1 or 2, S.N.O.O.P.S. for grades 4 or 5, and (new for 1998-99) Finders, Seekers, Science Keepers for kindergarten or grade 1. There is also a one-year language arts unit called The House for grades 3, 4, or 5.

GALAXY Classroom Science seeks to improve science learning for all students by giving teachers tools to create learning environments that stimulate and nourish inquiry-based learning. Through the "hands-on/minds-on" curriculum, students learn specified core science concepts and practice using scientific thinking processes (e.g., observing, communicating, organizing and comparing). The science units are organized around themes that follow the National Science Education Standards on science concepts and processes appropriate for students at each level. Additional underlying principles include constructivist thinking, cultural diversity, authentic inquiry, relevance for all students, and connection to state and national standards to improve student performance.

The themes, such as Science Is Doing What-Ifs to Use and Compare Materials, are developed through television broadcasts and classroom hands-on activities. In each 15-minute video episode, a diverse group of children model for students how curiosity, observation, comparing, and problem-solving can help them construct knowledge about science from the content and context of their lives. Students in the classroom investigate questions posed by the episode and attempt to answer them through a variety of activities. Teachers facilitate and encourage student collaboration, open-ended exploration, testing of ideas, and active involvement in the process of discovery. Students then use fax or e-mail technology to communicate their findings to the television show and other students on the network. Student work is shared on the television show and in student bulletins sent to all GALAXY classrooms.

Results

Independent comprehensive evaluations conducted of the initial demonstration phases of both science units found them "highly successful initiatives." For grade levels K-2, students in the GALAXY classroom showed a significant growth in curiosity (central to the development of scientific thinking processes) compared to their non-GALAXY peers. Most GALAXY students understood the concepts of the two themes, with almost half the students answering questions about one theme without making a single mistake. Teachers' personal experience and confidence in teaching science improved over a comparison group, and time spent teaching classroom science more than doubled for GALAXY teachers compared to the previous year.

S.N.O.O.P.S. students (grade levels 3-5) outperformed comparison groups in the use of scientific thinking processes, surpassing the next grade level in tests on classification abilities. The majority of GALAXY students demonstrated they understood the curriculum's core science concepts and could apply them in new contexts. GALAXY students showed more positive attitudes towards participating in science class than their counterparts. Teacher attitudes towards science teaching also improved. Teachers reported an increase in students' teamwork, communication, and writing skills as a result of working collaboratively and crafting detailed accounts of investigations and findings to fax to the network.

Implementation

- ***Project Capacity:*** EMG GALAXY is the national center, located in Scottsdale, Arizona. There are also regional staff throughout the country and an extensive electronic network.
- ***Faculty Buy-In:*** No formal process. EMG GALAXY requires that teachers receive training and have access to the equipment and material (videos may be mailed if

schools lack the satellite technology).

- ***Initial Training:*** Two-day training for all teachers using GALAXY Science. Training is usually conducted within 50 miles of a participating school. Teachers receive instructional guides as part of training.
- ***Follow-Up Coaching:*** EMG GALAXY provides a variety of support mechanisms, including periodic on-site coaching from regional staff, weekly planning calendars, teacher newsletters, updated curriculum resources on its Web site, and a toll-free number for teacher support. Additional teacher training is available via the program's satellite network.
- ***Networking:*** The program has an extensive networking system, including the satellite network, audio conferencing telephone, Web site, listserv, newsletters, a fax/phone/e-mail directory of all teachers, and a toll-free number for teacher support. The program suggests specific ways for classes to interact with other schools every two weeks. Teachers are expected to use fax or e-mail to encourage student communication and interaction.
- ***Implementation Review:*** Regional staff review implementation as part of periodic site visits. The program also tracks classroom participation by monitoring fax responses. It follows up with schools not using the fax technology to determine why the program is not being utilized fully and to provide assistance.

Costs

For 400-pupil schools with six or fewer teachers receiving training and materials, the first-year base fee for all GALAXY programs is $7,700, including a $3,500 annual technology fee. Costs increases to $8,000 to $10,000 for more than six teachers. Replacement of science materials costs $50 per classroom annually. Attendance by all participating teachers at a two-day initial training is required.

Schools will need an EMG satellite dish and receiver or can choose to receive video programming via VHS tape delivered overnight. Classes require a television and VCR for viewing programs and a fax machine and dedicated phone line (the fax is toll-free). E-mail Internet access is optional. Schools must maintain the technology.

Student Populations

GALAXY is designed to reach a diverse range of student populations to improve achievement in science by all students. In the pilot evaluation, 60-70% of the GALAXY students were classified as "disadvantaged," with 20% Limited English Proficiency. GALAXY Science Classroom is broadcast in English, Spanish, and open-captioned for the hearing impaired.

Special Considerations

GALAXY Science Classroom requires a shift for some teachers to an environment in which the teacher facilitates learning by collaborating with students as mutual explorers.

Selected Evaluations

Developer
None available.

Outside Researchers
Guth, G., Austin, S., De Long, B., & Pasta, D. (1995). *Evaluation of GALAXY Classroom Science for grades K-2: Final report.* San Francisco: Far West Laboratory for Educational Research and Development.

Guth, G., Austin, S., De Long, B., Pasta, D., & Block, C. (1995). *GALAXY Classroom Science evaluation for grades 3-5: Final report.* San Francisco: Far West Laboratory for Educational Research and Development.

Sample Sites

Castle Rock Elementary
732 Huntington Avenue, S.
Castle Rock, WA 98611
360-274-6555
Coordinator: Pam Kruse

Gates Elementary
2359 South Irish Road
Davison, MI 48423
810-658-5029
Teacher: Melvina Pasco

Thomas Hart Benton Elementary
429 South Leslie
Independence, MO 64050
816-521-2850
Coordinator: Karen Arnote

For more information, contact:

Bill Schmitt
EMG GALAXY Classroom
6710 East Camelback Road
Scottsdale, AZ 85251
Phone: 800-303-9070, ext. 64
Fax: 602-481-6484
E-mail: Bill_Schmitt@ccmail.emg.com
Web site: http://www.galaxy.org

Other Models

Basic Skill Builders (K-6)

IN BRIEF Basic Skill Builders	
Developer	Sopris West
Year Established	1979
# Schools Served (Jan. 1998)	2,200
Level	K-6
Primary Goal	to build fluency in basic skills
Main Features	• high expectations • emphasis on speed • daily exercises and measurements • teacher directed • supplements core curriculum
Results	positive results in reading, spelling, and math in several studies on special education students and fourth graders
Impact on Instruction	12-15 minutes per day of worksheets and timed skill practice
Impact on Organization/ Staffing	none
Impact on Schedule	none
Students Served	
Title I	yes
English-language learners	yes
Urban	yes
Rural	yes
Parental Involvement	practice sheets are sent home for parents to use with students
Technology	none
Materials	ample materials provided as part of the design

Origin/Scope

Basic Skill Builders (formally Precision Teaching Project) was developed in the Great Falls Montana Public Schools in the late 1970s. In the past 20 years it has been used in more than 2,000 schools in 41 states.

General Description

Basic Skills Builders is a K-6 program based on the premise that in order for students to master higher level skills, they must first have a solid foundation in core skills. It is also important that they be able to demonstrate their comprehension of core skills with both accuracy and speed.

Some students, particularly those considered at risk, do not always respond to approaches such as whole language or the discovery method. The Basic Skill Builders Project provides a set of classroom procedures that includes clear and high expectations, a sequenced curriculum, rapid exercises, and direct and daily measurements of student progress. Together these tools help students build and maintain fluency in such basic skills as reading, math, spelling, handwriting, and grammar.

Five steps guide the Basic Skill Builders process: (1) teachers select the skill and set expectations; (2) students complete Skill Builder Sheets through one-minute timed practices; (3) students score, record, and chart daily progress; (4) teachers review the charts and make instructional/curricular decisions; and (5) teachers, along with students, manage individual as well as group programs.

Basic Skill Builders is not a specific curriculum, but rather an approach that incorporates accuracy and speed to reinforce any method or approach. It is designed to supplement, not supplant, the core curriculum. It can therefore be implemented across content areas to support and reinforce whatever is being taught. Students need 12-15 minutes per day for skill practice.

Results

The Basic Skill Builders approach has showed positive results with special education students and other students traditionally classified as at risk. For example, compared to their non-special education counterparts, special education students who had used Basic Skill Builders showed no significant differences in math, spelling, and reading and remained "remediated" three years following their use of the approach. Another study showed that students who used the Basic Skill Builders approach for four years separated themselves significantly and positively from other fourth graders in the school district in reading, spelling, and mathematics, with the largest difference in mathematics (a 44 percentile difference in favor of the treatment group).

Implementation

- ***Project Capacity:*** The Basic Skill Builders Project is currently housed at and distributed through Sopris West, a publishing/training company in Longmont, Colorado. Along with the project director, six certified trainers are strategically located across the United States. Implementation materials, including training aids and student skill sheets, have been revised and are available for distribution.
- ***Faculty Buy-In:*** None required.
- ***Initial Training:*** A one-day training program is provided for teachers and support staff. Training and implementation materials include a student materials kit (30 folders, acetate, charts, pens, and sponges); Basic Skill Builder Sheets with answers (1,500 plus blackline masters in math, reading, grammar, map skills, and more); *Basic Skill Builders Handbook*; and other materials (timers, practice charts, music tapes, etc.).
- ***Follow-Up Coaching:*** A cadre of certified trainers is available for on-site visitations as well as e-mail and telephone conferences. Building-level coaches are recommended for more intensive training following the initial school-wide training.
- ***Networking:*** In addition to a Web site and an Internet "chat line," a national conference is held annually.
- ***Implementation Review:*** Schools are encouraged to monitor and report progress (training and implementation) on an annual basis. Emphasis is placed on curriculum-based measures as well as results from standardized tests.

Costs

One-time start up costs include a handbook (one per teacher); a student materials kit (one per class); a set of Basic Skill Builder sheets (one set per building); and training costs (one day training fee plus travel). Based upon a building of 25 teachers, the total one-time startup costs would be approximately $2,100, or $85 per classroom. There also are continued costs for materials.

Student Populations

Basic Skill Builders has been adopted in a variety of urban and rural buildings representing various socioeconomic levels, ethnicities, and disabilities.

Special Considerations

The philosophy underlying this program is based upon promoting basic skills through setting high expectations, breaking the curriculum into fine slices, and practicing. Teachers accustomed to constructivist approaches (e.g., whole-language) may not be amenable to the Basic Skill Builders approach.

Selected Evaluations

Developer

Documents about program effectiveness are available through Sopris West.

Outside Researchers

U.S. Department of Education. (1979). *National Diffusion Network reports on Great Falls MT, Precision Teaching Project.* Washington, DC: Author.

Sample Sites

Chief Joseph Elementary
Great Falls Public Schools
5303 3rd Avenue South
Great Falls, MT 59409
406-791-2200
Principal: Denise Conrad

Hillcrest Elementary
Oak Harbor Public Schools
1500 NW 2nd Avenue
Oak Harbor, WA 98277
361-679-5810
Principal: Suellen Atkinson

For more information, contact:

Ray Beck, Project Director
Basic Skill Builders Project
Sopris West
4093 Specialty Place
Longmont, CO 80504
Phone: 800-547-6747
Fax: 303-776-5934
E-mail: raybeck@sopriswest.com
Web site: http://www.sopriswest.com

HOTS (Higher Order Thinking Skills): Grades 4-8

IN BRIEF Higher Order Thinking Skills (HOTS)	
Developer	Stanley Pogrow, University of Arizona
Year Established	1981
# Schools Served (Jan. 1998)	1,900
Level	grades 4-8
Primary Goal	to develop thinking skills in ways that transfer to gains in basic skills, academic performance, and social confidence
Main Features	• systematically designed higher-order thinking activities • use of computers in combination with Socratic dialogue
Results	HOTS students have consistently outperformed control groups on reading, math, and higher order thinking
Impact on Instruction	HOTS teachers avoid lecture, drill, and worksheets in favor of dialogue, coaching, and discussion
Impact on Organization/ Staffing	requires specially-trained teacher
Impact on Schedule	pull-out program; 35-40 minutes per day, 4-5 days per week for 1-2 years
Students Served	
Title I	yes
English-language learners	no
Urban	yes
Rural	yes
Parental Involvement	informal only; HOTS teachers maintain contact with parents; parents are encouraged to visit HOTS classes
Technology	cluster of 7-12 Macintosh or Windows PCs
Materials	software, trade books, curriculum

Origin/Scope

Higher Order Thinking Skills (HOTS) was founded in 1981 by Stanley Pogrow, Associate Professor of Education at the University of Arizona. There are currently 1,900 schools implementing HOTS in 48 states.

General Description

The HOTS program uses computer activities, specially designed curricular materials, and Socratic teaching strategies to enhance the thinking skills of Title I and learning disabled students in fourth through eighth grades. Participants in HOTS classes spend 35 minutes a day, four days a week, for one to two years in the HOTS program. Generally HOTS instruction takes place during the time that is traditionally devoted to Title I instruction, and is delivered by Title I teachers specially trained in the HOTS method. Teachers attend a week-long workshop that helps them to shift from traditional teaching approaches of lecturing, refereeing, and linear sequencing to more open-ended, Socratic coaching techniques. All traditional drill and practice activities are replaced in HOTS classes with systematically designed higher order thinking activities. No workbooks or worksheets are used. Instead, Socratic dialogues are conducted around specially designed HOTS computer activities. Computers with HOTS software are used because of their ability to enhance motivation and to respond immediately to students' ideas.

The first half of HOTS classes are teacher-led discussions where teachers probe student responses in accordance with Socratic techniques. The discussions, specified in a detailed curriculum, are designed to develop the thinking skills of: (a) metacognition, (b)

inference from context, (c) decontextualization, and (d) information synthesis. These thinking skills are viewed as the foundations of learning and successful work.

After the discussion time, students are given a computer challenge to work out. The challenge is a strategic problem wherein they have to develop a method to achieve a goal that involves using information about several factors. For example, students may be asked to land a hot-air balloon at a precise point taking into account information about altitude, wind direction, speed, terrain, and other flying objects, and how a hot-air balloon operates. Using the information on the computer screen in conjunction with strategic problem solving simultaneously develops reading comprehension and metacognition skills. Teachers monitor students' computer work. They work to stimulate student thinking by encouraging them to articulate their ideas and to explain why and how the computer reacts to their strategies. Continually pressing students to explore their strategies and results is intended to increase the sophistication of their language use — both in terms of comprehension and articulation. This expanded skill and understanding of language use enhances their ability to learn content.

Results

Over the past six years, HOTS has been thoroughly evaluated at several sites for its effect on student reading comprehension, grade point average, problem solving methods, metacognitive abilities, and writing abilities, as well as other achievement indicators. Though each study was unique in the design and instruments used, all indicated that students receiving HOTS instruction were performing better than or equal to control groups. For example, two separate studies, one based on Iowa Test of Basic Skills student scores, and one based on California Achievement Test student scores, found that HOTS students consistently made significantly greater progress in math and reading achievement than control groups did. (In one instance, fifth grade math students in both groups made substantial gains.) Another study that compared HOTS instruction to traditional Title I instruction for fourth and fifth grade students found that the HOTS program was effective in raising student self-concept, sequential synthesis, and higher order thinking skills for fifth grade students. It also found that both HOTS and Title I instruction raised student achievement scores.

Implementation

- ***Project Capacity:*** HOTS currently has the capacity to organize up to 80 trainings/year (multiple sites attend each training) around the country with its 21 national trainers. This enables the program to establish 500 new sites/year.
- ***Faculty Buy-In:*** Total faculty buy-in is encouraged but not required. HOTS will provide training to any site with at least six registered participants.
- ***Initial Training:*** HOTS trainers provide sites with a five-day small group training for teachers and paraprofessionals. Principals and coordinators attend the training on one of those days.
- ***Follow-Up Coaching:*** Brush-up training and site visitations are optional with the HOTS program.
- ***Networking:*** HOTS supports an 800 phone line, e-mail technical support capabilities, and an informational Web site and provides low-cost updates on curriculum and software when appropriate.
- ***Implementation Review:*** HOTS developers survey all sites every three years.

Costs

Expenses vary considerably from school to school, but in general it costs $1,700 to train the first teacher (including curriculum and support materials), and $1,400 for each additional teacher. Sites need to devote a cluster of 7-12 Macintosh or Windows PCs to HOTS instruction, and they must purchase $1,200 worth of HOTS software.

Student Populations

HOTS targets Title I and learning disabled students in grades 4-8.

Special Considerations

In 1997, a supplementary HOTS program was developed called UltraHOTS. UltraHOTS combines the use of HOTS with other content-based programs that are also designed to develop metacognitive skills via a Socratic problem solving environment. The program targets all students.

Selected Evaluations

Developer

None available.

Outside Researchers

Bushon, S. (1992). *Kenai Peninsula Borough School District.* Soldotna, AK. Unpublished study.

Corliss, W. (1993). *Detroit Public Schools.* Detroit, MI. Unpublished study.

Darmer, M. (1995). *Elvira Elementary School* (Sunnyside Unified School District). Tucson, AZ. Unpublished study.

Laboy, M. (1994). *Landis Intermediate School.* Vineland Board of Education, Vineland, NJ. Unpublished study.

Sample Sites

Central Middle School
210 North Main Street
Broken Arrow, OK 74012
918-259-4340
Contact: John Dickman

Hawthorne Elementary
8301 Rawles Avenue
Indianapolis, IN 46219
317-899-8833
Contact: Joe Cline

West Avenue Elementary
3915 West Avenue
San Antonio, TX 78213
210-492-0750
Contact: Gaby Holstein

For more information, contact:

Laurie Dagostino, Director
HOTS Dissemination
Education Innovations
2302 E. Speedway, #114
Tucson, AZ 85733
Phone: 520-795-2143
Fax: 520-795-8837
E-mail: info@HOTS.ORG
Web site: http://WWW.HOTS.ORG

Appendix A

List of References

List of References

Documents Consulted in Selecting Models for Inclusion

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Kentucky Department of Education. (1997). *Results based practices showcase: 1997-98.* Frankfort, KY: Author.

Lasoff, M., Olson, L., & Sommerfeld, M. (1994, November 2). School reform networks at a glance. *Education Week,* pp. 34-41.

Levinson, L., & Stonehill, R. (1997). *Tried and true: Tested ideas for teaching and learning from the regional educational laboratories.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

Planning and Evaluation Service. (1997). *Promising practices in reading and mathematics/Whole school programs.* Unpublished document, U.S. Department of Education.

Slavin, R. E., and Fashola, O. S. (in press). *Show me the evidence: Proven and promising programs for America's schools.* Thousand Oaks, CA: Corwin Press.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1997). *What do we know: Widely implemented school improvement programs.* Philadelphia: Laboratory for Student Success.

Additional Resources

American Federation of Teachers. (1997). *Building on the best, learning from what works: Four promising schoolwide academic programs.* Washington, DC: Author.

American Federation of Teachers. (1997). *Building on the best, learning from what works: Seven promising reading and English language arts programs.* Washington, DC: Author.

Kadel-Taras, S. (1997). *Resources for school improvement.* Greensboro, NC: SouthEastern Regional Vision for Education (SERVE).

Talley, S., & Martinez, D. H. (Eds.). (1998). *Tools for schools: School reform models supported by the National Institute on the Education of At-Risk students.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, National Institute on the Education of At-Risk students.

Appendix B

Components of Comprehensive School Reform Programs

COMPONENTS OF COMPREHENSIVE SCHOOL REFORM PROGRAMS

Funds under this program may only be used for comprehensive school reform programs. A comprehensive school reform program is one that integrates, in a coherent manner, **all** nine of the following components:

(1) **Effective, research-based methods and strategies**: A comprehensive school reform program employs innovative strategies and proven methods for student learning, teaching, and school management that are based on reliable research and effective practices, and have been replicated successfully in schools with diverse characteristics.

(2) **Comprehensive design with aligned components**: The program has a comprehensive design for effective school functioning, including instruction, assessment, classroom management, professional development, parental involvement, and school management, that aligns the school's curriculum, technology, and professional development into a schoolwide reform plan designed to enable all students--including children from low-income families, children with limited English proficiency, and children with disabilities--to meet challenging State content and performance standards and addresses needs identified through a school needs assessment.

(3) **Professional development**: The program provides high-quality and continuous teacher and staff professional development and training.

(4) **Measurable goals and benchmarks**: A comprehensive school reform program has measurable goals for student performance tied to the State's challenging content and student performance standards, as those standards are implemented, and benchmarks for meeting the goals.

(5) **Support within the school**: The program is supported by school faculty, administrators, and staff.

(6) **Parental and community involvement**: The program provides for the meaningful involvement of parents and the local community in planning and implementing school improvement activities.

(7) **External technical support and assistance**: A comprehensive reform program utilizes high-quality external support and assistance from a comprehensive school reform entity (which may be a university) with experience or expertise in schoolwide reform and improvement.

(8) **Evaluation strategies**: The program includes a plan for the evaluation of the implementation of school reforms and the student results achieved.

(9) **Coordination of resources**: The program identifies how other resources (Federal, State, local, and private) available to the school will be utilized to coordinate services to support and sustain the school reform.

Appendix C

Continuum of Evidence of Effectiveness

Continuum of Evidence of Effectiveness

	Most Rigorous	Somewhat Rigorous	Marginal
Theory/Research Foundation	Does the model explain the theory behind its design, including references to the scientific literature, that elucidate why the model improves student achievement?	Does the model state the theory behind its design explaining how the model's components reinforce one another to improve student achievement?	Does the model explain the theory behind its design?
Evaluation-based Evidence of Effectiveness	Have student achievement gains been shown using experimental and control groups created through large-scale random assignment or carefully matched comparison groups? Has the model produced educationally significant pre and post intervention student achievement gains as reliably measured using appropriate assessments? Have the student achievement gains been sustained for three or more years? Have the student achievement gains been confirmed through independent, third-party evaluation?	Have student achievement gains been shown using between or within-school comparisons? Has the model produced student achievement gains relative to district means or other comparison groups using appropriate assessment instruments? Have the student achievement gains been sustained for one or two years? Has the model been evaluated by a state, district, or school evaluation team?	Have student achievement gains been shown for a single school? Has the model produced improvements on other indicators of student performance , e.g. student attendance, graduation rates, or student engagement? Have other indicators of improved student performance been sustained for one or two years? Has the model been evaluated by its developers?

Implementation	Has the model been fully implemented in multiple sites for more than 3 years? Is documentation available that clearly specifies the model's implementation requirements and procedures, including staff development, curriculum, instructional methods, materials, assessments, and costs? Are the costs of full implementation clearly specified, including whether or not the costs of materials, staff development, additional personnel etc. are included in the program's purchase price? Has the model been implemented in schools with characteristics similar to the target school: same grade levels, similar size, similar poverty levels, similar student demographics such as racial, ethnic, and language minority composition?	Has the model been fully implemented in the original site(s) for more than three years? Is documentation available that attempts to describe the implementation requirements of the model including staff development, curriculum, instruction methods, materials, and assessments? Have the costs of full implementation been estimated, including whether or not the costs of materials, staff development, additional personnel, etc. are included in the program's purchase price? Has the model been successfully implemented in at least one school with characteristics similar to the target school?	Has the model been fully implemented in the original pilot site(s) for a minimum of one school year? Is documentation available that provides a general description of the program's requirements? Is documentation available that provides general information about the program's costs? Is information on grade level, size, student demographics, poverty level, and racial, ethnic and language minority concentration available for the schools where the model has been implemented?
Replicability	Has the model been replicated successfully in a wide range of schools and districts, e.g. urban, rural, suburban? Have the replication sites have been evaluated, demonstrating significant student achievement gains comparable to those achieved in the pilot site(s)?	Has the model been replicated in a number of schools or districts representing diverse settings? Have some replication sites been evaluated, demonstrating positive gains in student achievement?	Is full replication of the model being initiated in several schools? Are promising initial results available from the replication sites?

The following examples show how the evidence of effectiveness table might be used:

Example 1

> *A school is considering a model whose stated purpose is to facilitate the school's development of a common set of goals for the school. The model provides five teachers and the principal with coaching in the principles of whole school transformation. Each school using the model is put in touch with other schools using the model. To-date the summary of the research-base for the model suggests that a single school which has used the model for the past two years has shown improvement in math scores over the last year. There is, however, no systematic evaluation of the model currently underway or planned. The costs for the model are approximately $3,000 per participant, approximately $20,000 per school.*

Using the table as a guide, based on the description provided, a State, LEA, or school would probably conclude that the evidence of effectiveness for the model is unacceptably weak and, therefore, not accept this model. No research basis or other justification is provided for the theory behind the model, only a very vague statement that school staff should work together to be effective. The evidence for the effectiveness of the implementation of the model is extremely sketchy. The description includes a statement that the model has been implemented in a number of schools but there is no analysis of what it would take to implement the model. Given that only a few teachers and the principal would be involved and the estimated costs, the model probably provides only a low level of involvement. The model provides no evidence that this level of implementation is sufficient to produce results. The only student achievement results presented are for a single school for a short period of time in one subject. There is no information on how achievement was measured nor is any evaluation planned. Given this level of evidence, the model would likely fall below the marginal standards of rigor that States, LEAs, and schools would want to consider for a research-based comprehensive model of school reform. Apart from the marginal evidence of effectiveness, the model also does not address all nine components listed in Question B-1.

Example 2

A school is considering a model that emphasizes a curriculum in reading and mathematics using specific instructional techniques to guide classroom teaching and learning activities. The model provides teachers with intensive, on-going staff development using professional facilitators trained by the model developer. In addition to providing staff development, the facilitators remain on site as the model is implemented to ensure that all components of the model are working together. The program has been fully implemented in approximately 300 schools in 37 districts in 9 states around the country. Student achievement is measured not only by commercial standardized tests but also by state assessment systems where appropriate. Local adaptations of the model are available for schools serving a predominately Spanish-speaking community. When compared to schools matched on socio-economic characteristics, schools using this model show reading and math scores approximately three-quarters of a standard deviation higher. These results are similar for both African-American and white students. The program has been evaluated by its developer in approximately 12 sites over two years.

The evidence for this model is much stronger than for Example 1. While this model provides some details along each of the four dimensions in the chart, the implementation evidence is quite general. Furthermore, the school proposing to implement this model would need to address, in a coherent manner, all nine components listed in Question B-1.

There are some additional questions that States and school might ask about this model: Could the developer describe what was provided in the way of instructional materials? How will teachers learn the principles of instruction? For which grades and which types of schools are the achievement gains demonstrated? Because the model has only been evaluated by the developer, States or school could ask if there are any plans for an independent, third-party evaluation. While it is likely that the developer could provide satisfactory answers to most of the questions, the process would help reveal the relative strengths and weaknesses of this particular model.

Example 3

An elementary school in need of improvement has been studying how it could improve the very low scores on State assessments scores of its students in reading, math and other core content areas. The school leadership, in consultation with staff, parents, local university representatives, and community groups, has carefully reviewed school performance data and assessed what needs to be improved across the entire school program, concluding that the school needs a comprehensive approach to reform all aspects of its operations and instructional program.

As part of this process, participants reviewed both individual academic curricular programs as well as comprehensive reform models that include both teaching and learning materials and guidance for school organization and management. The school and its partners looked specifically at evidence of effectiveness for both the individual programs and the comprehensive models. In addition, they studied the match between the programs and the State's rigorous content standards of excellence for academic subject matter, and sought out information on how well the programs had been implemented in similar districts. After considerable discussion among school administrators, teachers, parents, community members and outside experts, the school decided to develop its own comprehensive school reform model, which would include upgrading curriculum and instruction, teacher professional development, school organization, parental involvement activities, and testing.

The school's proposed model is based on the careful integration of distinct, research-based curricular programs with strong track records of effectiveness. The goal of the integration is a coherent instructional package that would address State content and performance standards; be aligned with district and State assessment systems; include professional development that helps teachers master the curricular programs as well as integrate the parts into a unified instructional approach; and include an evaluation strategy so the school can learn what is working and change what is not. As a result of this process, the school has decided to work under a Title I schoolwide approach so that it can bring together a variety of Federal, State, and other resources to adopt the curricular programs necessary to reform its instructional program and then move into a long term implementation effort.

Using the table as a guide, the example makes clear that the school has looked at the evidence of effectiveness that supports its choice of discrete curricular programs (in that regard addressing issues in row two). However, row one of the table suggests that, in its application, the school should explain the theoretical or research foundation for the model it proposes. At this point the school has not made clear why it expects its comprehensive model, which combines multiple discrete curricular elements, to function effectively as a whole. Concerning implementation, it is unclear how the school has assessed what will be

required to make the program work at the classroom level. Thus, answers to the questions in row three of the table would be useful in the school's CSRD application. Finally, the example indicates that the school sought information on the uses in other settings of the selected programs. This shows a sensitivity to the questions raised in row four of the table. In a CSRD application, the school should discuss these issues more fully. The school should also discuss more thoroughly how its model incorporates each of the nine components listed in Question B-1.

Appendix D

Regional Educational Laboratories

REGIONAL EDUCATIONAL LABORATORIES

NORTHEAST AND ISLANDS LABORATORY AT BROWN (LAB)

Executive Director:	Dr. Phil Zarlengo
Specialty Area:	Language and Cultural Diversity
Region Served:	Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, Puerto Rico, and the Virgin Islands
Address:	222 Richmond Street, Suite 300 Providence, RI 02903-4226
Phone:	(401) 274-9548
Fax:	(401) 421-7650
E-mail:	LAB@brown.edu
Internet:	http://www.lab.brown.edu

MID-ATLANTIC LABORATORY FOR STUDENT SUCCESS (LSS)

Executive Director:	Dr. Margaret C. Wang
Specialty Area:	Urban Education
Region Served:	Delaware, Maryland, New Jersey, Pennsylvania, and Washington, DC
Address:	Temple University/Center for Research in Human Development and Education 933 Ritter Annex, 13th St. and Cecil B. Moore Avenue Philadelphia, PA 19122
Phone:	(215) 204-3030
Fax:	(215) 204-5130
E-mail:	lss@vm.temple.edu
Internet:	http://www.temple.edu/departments/lss

APPALACHIA EDUCATIONAL LABORATORY (AEL)

Executive Director:	Dr. Terry L. Eidell
Specialty Area:	Rural Education
Region Served:	Kentucky, Tennessee, Virginia, and West Virginia
Address:	Post Office Box 1348 Charleston, WV 25325-1348
Phone:	(304) 347-0400
Fax:	(304) 347-0487
E-mail:	aelinfo@ael.org
Internet:	http://www.ael.org

SOUTHEASTERN REGIONAL VISION FOR EDUCATION (SERVE)

Executive Director:	Don Holznagel
Specialty Area:	Early Childhood Education
Region Served:	Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina
Address:	Post Office Box 5367 Greensboro, NC 27435
Phone:	(910) 334-3211
Fax:	(910) 334-3268
E-mail:	info@serve.org
Internet:	http://www.serve.org

NORTH CENTRAL REGIONAL EDUCATIONAL LABORATORY (NCREL)

Executive Director:	Dr. Jeri Nowakowski
Specialty Area:	Educational Technology
Region Served:	Illinois, Indiana, Iowa, Michigan, Ohio, and Wisconsin
Address:	1900 Spring Road, Suite 300 Oak Brook, IL 60521-1480
Phone:	(630) 571-4700
Fax:	(630) 571-4716
E-mail:	info@ncrel.org
Internet:	http://www.ncrel.org

SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY (SEDL)

Executive Director:	Dr. Wesley A. Hoover
Specialty Area:	Language and Cultural Diversity
Region Served:	Arkansas, Louisiana, New Mexico, Oklahoma, and Texas
Address:	211 East Seventh Street Austin, TX 78701-3281
Phone:	(512) 476-6861
Fax:	(512) 476-2286
E-mail:	jpollard@sedl.org
Internet:	http://www.sedl.org

MID-CONTINENT REGIONAL EDUCATIONAL LABORATORY (McREL)

Executive Director:	Dr. J. Timothy Waters
Specialty Area:	Curriculum, Learning, and Instruction
Region Served:	Colorado, Kansas, Missouri, Nebraska, North Dakota, and Wyoming
Address:	2550 South Parker Road, Suite 500 Aurora, CO 80014-1678
Phone:	(303) 337-0990
Fax:	(303) 337-3005
E-mail:	info@mcrel.org
Internet:	http://www.mcrel.org

WEST ED

Executive Director:	Dr. Glen Harvey
Specialty Area:	Assessment and Accountability
Region Served:	Arizona, California, Nevada, and Utah
Address:	730 Harrison Street San Francisco, CA 94107-1242
Phone:	(415) 565-3000
Fax:	(415) 565-3012
E-mail:	tross@wested.org
Internet:	http://www.wested.org

NORTHWEST REGIONAL EDUCATIONAL LABORATORY (NWREL)

Executive Director/CEO:	Dr. Ethel Simon-McWilliams
Specialty Area:	School Change Processes
Region Served:	Alaska, Idaho, Montana, Oregon, and Washington
Address:	101 S.W. Main Street, Suite 500 Portland, OR 97204-3297
Phone:	(503) 275-9500
Fax:	(503) 275-0448
E-mail:	info@nwrel.org
Internet:	http://www.nwrel.org

PACIFIC RESOURCES FOR EDUCATION AND LEARNING (PREL)

Executive Director:	Dr. John W. Kofel
Specialty Area:	Language and Cultural Diversity
Region Served:	American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Hawaii, Republic of the Marshall Islands, and the Republic of Palau
Address:	828 Fort Street Mall, Suite 500 Honolulu, HI 96813-4321
Phone:	(808) 533-6000
Fax:	(808) 533-7599
E-mail:	askprel@prel.hawaii.edu
Internet:	http://www.prel-oahu-1.prel.hawaii.ed

Appendix E

Comprehensive Regional Assistance Centers

COMPREHENSIVE REGIONAL ASSISTANCE CENTERS (CC)

Region I
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

New England Comprehensive Assistance Center
Wende Allen, Director
Phone: (800) 332-0226
E-mail: wendea@edu.org

Region II
New York State

New York Technical Assistance Center (NYTAC)
LaMar P. Miller, Executive Director
Phone: (800) 469-8224
E-mail: millrla@is2.nyu.edu

Region III
Delaware, Maryland, New Jersey, Ohio, Pennsylvania, Washington, DC

Region III Comprehensive Center
Charlene Rivera, Director
Phone: (703) 528-3588 or (800) 925-3223
E-mail: crivera@ceee.gwu.edu

Region IV
Kentucky, North Carolina, South Carolina, Tennessee, Virginia, West Virginia

Region IV Comprehensive Technical Assistance Center
Pamela K. Buckley, Executive Director
Phone: (800) 624-9120
E-mail: buckley@ael.org

Region V
Alabama, Arkansas, Georgia, Louisiana, Mississippi

Region 5 Southeast Comprehensive Assistance Center
Hai T. Tran, Director
Phone: (504) 838-6861 or (800) 644-8671
E-mail: htran@sedl.org

Region VI
Iowa, Michigan, Minnesota, North Dakota, South Dakota, Wisconsin

Comprehensive Regional Assistance Center Consortium - Region VI
Walter G. Secada, Director
Phone: (608) 263-4220
E-mail: wgsecada@facstaff.wisc.edu

Region VII
Illinois, Indiana, Kansas Missouri, Nebraska, Oklahoma

Region VII Comprehensive Center
Belinda Biscoe, Executive Director
Phone: (405) 325-1729 or (800) 228-1766
E-mail: biscoe@ou.edu

Region VIII
Texas

STAR Center
Dr. Alberto Cortez, Site Director
Phone: (210) 684-8180 or (888) 394-7827
E-mail: acortez@txdirect.net

Region IX
Arizona, Colorado, New Mexico, Nevada, Utah

Southwest Comprehensive Regional Assistance Center
Paul E. Martinez, Director
Phone: (505) 891-6111 or (800) 247-4269
E-mail: pmartinez@cesdp.nmhu.edu

Region X
Idaho, Montana, Oregon, Washington, Wyoming

Northwest Regional Assistance Center
Carlos Sundermann, Director
Phone: (503) 275-0653 or (800) 547-6339
E-mail: sundermc@nwrel.org

Region XI
Northern California

Comprehensive Assistance Center WestEd
Beverly Farr, Director
Phone: (415) 565-3009 or (800) 64-LEARN
E-mail: bfarr@wested.org

Region XII
Southern California

Southern California Comprehensive Assistance Center
Henry Mothner, Director
Phone: (562) 922-6343
E-mail: mothner_henry@lacoe.edu

Region XIII
Alaska

Alaska Comprehensive Regional Assistance Center
JoAnn Henderson, Director
Phone: (907) 586-6806
E-mail: joannh@akrac.k12.ak.us

Region XIV
Florida, Puerto Rico, Virgin Islands

Comprehensive Assistance Center
Trudy Hensley, Director
Phone: (770) 723-7434 or (800) 241-3865
E-mail: thensley@ets.org

Region XV
American Samoa, Federated States of Micronesia, Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Republic of the Marshall Islands, Republic of Palau

Pacific Comprehensive Assistance Center
Thomas W. Barlow, Executive Director
Phone: (808) 533-6000
E-mail: barlowt@prel.hawaii.edu

Appendix F

Comments Form

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Comprehensive School Reform Catalog
Comments Form

This catalog was developed to support schools, school districts, and states as they choose reform models for their comprehensive school reform programs. There will be a second edition within one year and your response to the following questions will assist in making the catalog even more useful.

1. How important is comprehensive school reform to you?

Very important				**Not important**
1	**2**	**3**	**4**	**5**

2. How informative about school reform models is this catalog?

Very informative				**Not informative**
1	**2**	**3**	**4**	**5**

3. How useful is the catalog for choosing reform models?

Very useful				**Not useful**
1	**2**	**3**	**4**	**5**

4. How well organized is the catalog?

Very well organized				**Not well organized**
1	**2**	**3**	**4**	**5**

5. How easy is the catalog to use?

Very easy to use				**Not easy to use**
1	**2**	**3**	**4**	**5**

6. Additional comments:

Please provide the following descriptive information about yourself.

Organization:

- ❑ State Department of Education
- ❑ Regional Assistance Center (in state)
- ❑ Comprehensive Regional Assistance Center
- ❑ School District
- ❑ Local District
- ❑ Other: _____

Position:

- ❑ Administrator
- ❑ Teacher
- ❑ Curricular development/resource person
- ❑ Parent/community member
- ❑ Title I specialist
- ❑ Other: _____